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ABSTRACT

Covering 1978, the first year that vocational programs and related activities were supported under P.L. 94-482, this report describes the impact for each section of the Vocational Education Amendments of 1976 on the growth and development of vocational and technical education. Materials, divided into two sections on state vocational and national programs, are presented in the same order that they appear in the act to provide easy access. These results are reported: an all-time high total enrollment, increased male and female enrollment in nontraditional vocational programs, increased enrollment of disadvantaged and minority students, nearly 2,250,000 program completers at all levels, and appropriations and expenditures for vocational education totaling over 5.6 billion dollars. These other specific topics are emphasized: expansion of state advisory councils on vocational education for broader representation of business, labor, educational, and minority interests; states' assessment by Management Evaluation Review for Compliance Quality; implementation of displaced homemaker programs; and development and operation of a Vocational Education Data Reporting and Accounting System. (YLB)

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ED185387

STATUS OF VOCATIONAL EDUCATION

IN

FY 1978

A Report to the Congress by the
U.S. Commissioner of Education

CE 024 986

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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U.S. DEPARTMENT OF HEALTH,
EDUCATION, AND WELFARE

OFFICE OF EDUCATION
WASHINGTON, D.C. 20202

TO THE CONGRESS OF THE UNITED STATES:

As Commissioner of Education, it is my honor to submit herewith the report on the status of vocational education for Fiscal Year 1978, including data on information elements developed in the national vocational education data reporting and accounting system as well as summaries of findings of reviews and audits required of the Bureau of Occupational and Adult Education and of evaluations required of the States.

This report was prepared by the Division of Vocational and Technical Education, Bureau of Occupational and Adult Education, and is transmitted in accordance with the requirements of Section 112(c) of Public Law 94-482.

Respectfully yours,

U.S. Commissioner
of Education

EXECUTIVE SUMMARY

The Vocational Education Amendments of 1976, Public Law 94-482, and the accounts of testimony leading to their enactment reflect the profound concern Congress had that this legislation result in sweeping change from conditions of the past. The provisions of the act go much further than the stated intent of this and prior Federal legislation to "extend and improve vocational education." By prescribing specific areas of concern which must be dealt with if a State is to receive Federal funds, Congress required improved planning, data systems, evaluation and research. Additionally, attention was paid to the accessibility of vocational education for minorities, women, handicapped, and disadvantaged with specific requirements for overcoming sex discrimination and sex stereotyping. Improved coordination with other agencies and programs was also established as a priority.

Fiscal Year 1978, the first full year of implementation of the 1976 Amendments, has resulted in across-the-board improvement. Although very few of the results could be termed dramatic, significant progress has been made in meeting the purposes and terms of the act.

In FY 1978, total enrollment reached an all-time high of more than 16.7 million persons. This number represents a modest 2.3 percent increase over 1977 but a significant 44 percent increase over 1972. Encouraging, too, is that growth is still being experienced in new and emerging occupations such as electronics, medical emergency technology and law enforcement.

Positive enrollment changes are apparent in the numbers of women entering some traditionally male vocational programs. Most notable increases were in electronics, agriculture, supervisor and management development, and auto mechanics. Moreover, the percentage of males enrolled in consumer and homemaking education increased from 8 percent in 1972 to 28 percent in 1978 and in occupational home economics from 15.3 percent in 1972 to 17 percent in 1978.

With the extension of vocational education to disadvantaged persons, enrollments of 1.8 million were realized in 1978, an increase of some 11 percent since 1972.

A result of the required use of 10 percent of the basic Federal grant to serve the handicapped has been an enrollment increase of 55 percent since 1972, for a total of 350,000 handicapped persons enrolled in vocational education programs in 1978.

Improvements in guidance and counseling programs, as well as more active recruitment, have paid dividends by increasing the number of minority students enrolled in vocational education programs. State reports for 1978 show increases since 1972 of 102 percent for Asian or Pacific Islanders; 51 percent for Hispanics; 46 percent for Blacks (not of

Hispanic origin); and 36 percent for American Indians or Alaska Natives.

Although the comprehensive data system required to identify student placement in jobs has not become fully operational, sufficient data from on-going reporting are available to provide some insight into the status of persons completing vocational programs.

Nearly 2,250,000 persons completed vocational programs at all levels. Of these, 54 percent were available for employment, while 24 percent were not, and the status of 22 percent were unknown. Those continuing their schooling made up 72 percent of those counted as not available for employment.

States reported that 90.5 percent of completers who were available for work, were in fact, employed, while 9.5 percent were unable to find work.

Appropriations and expenditures for vocational education reached an all-time high in FY 1978 of more than $5.6 billion. This increase of nearly 110 percent over 1972 was largely the result of State and local spending. Although the Federal dollar allotment has increased since 1972 by over $105 million, the percentage increase of the Federal expenditure has been overshadowed by State and local resources. The Federal appropriation for FY 1978 was $577.5 million or 54 percent of the $995 million authorized in the act.

A major concern of Congress is to eliminate sex discrimination and sex stereotyping in vocational education. Even though this was a new provision in the legislation, significant accomplishment resulted from first year efforts. All States have assigned at least one person on a permanent basis to work full time in the mandated functions on sex equity. Progress has been evident in creating awareness, providing assistance to local education agencies, collecting data, and reviewing contracts and grants. In nearly all States, sex equity coordinators have conducted workshops involving State staff and, in many cases, local administrators, teachers, and counselors in programs for eliminating sex discrimination and sex stereotyping. Help has been provided local education agencies in developing action plans. Data collection will become an important tool for use by States in awarding incentive grants to local education agencies who have shown significant progress in non-traditional enrollments.

In agreement with stipulations contained in the new law, State Advisory Councils on Vocational Education (SACVE) have been expanded to include broader representation from business, labor, education and minority interests. Total SACVE membership rose from 1,228 in 1977 to 1,545 in 1978. However, the most dramatic increase occured in the representation of women on SACVEs, which has risen by 234 percent between 1975 and 1978. Local advisory councils have undergone similar expansion, with a total of 11,871 in operation during FY 1978.

Under a process called Management Evaluation Review for Compliance/Quality (MERC/Q), 12 States underwent on-site visits by evaluation teams under the leadership of the Division of Vocational and Technical Education during FY 1978. The teams assessed each State's compliance with Federal regulations and its capacity and performance in conducting vocational education programs supported with Federal funds. In addition, the team reviewed the States conformity with adult education regulations, section 112 of the Comprehensive Employment and Training Act, title IX (sex discrimination), and section 504 of the Rehabilitation Act.

In general States scored high, with an average of 80.9 percent compliance rate, while non-compliance averaged 6 percent of the instances of review. An average of 13 percent of the items were categorized as "to be determined." This was primarily due to the fact that evaluations occurred soon after implementation of the new vocational amendments and regulations, and States had not been able to complete the requirements of some regulations by the time on-site reviews were conducted. States were notified in writing when found to be in non-compliance and were requested to provide evidence of compliance in a reasonable time period.

California, Florida, Idaho, Kentucky, New York, Ohio, and Tennessee have led the Nation in implementing displaced-homemaker programs. These States are providing a broad range of services as well as conducting workshops on money management, skills assessment, divorce counseling, assertiveness training and job hunting. Other States are in the organizing stage and will have active programs in 1979.

After suffering the expected growing pains, the Vocational Education Data System (VEDS) became operational, to a limited degree, during the latter part of 1978. It is evident that VEDS will play an important role in standardizing reporting and accounting in vocational education so that a meaningful synthesis and analysis of data gathered locally and from the States will be possible. It is anticipated that as VEDS gains sophistication, much of the inadequacy of previous data collection efforts will be corrected.

In summary, the first year under P.L. 94-482 has been one of assessment, planning, and plotting new courses of action. It has not been without frustration for program managers at all levels of government nor has it been devoid of reward and success as new initiatives have taken shape and existing efforts expanded and improved.

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FOREWORD

This report covers fiscal year 1978, the first year that vocational programs and related activities were supported under the P.L. 94-482, the Vocational Education Amendments of 1976. It was prepared not only to comply with the law, but also as part of a long tradition of reporting on the condition of vocational education to State and local administrators, to vocational teachers and to the American public. The report describes the impact for each Section of the 1976 Amendments on the growth and development of vocational and technical education. Problems as well as accomplishments are described. Special emphasis is placed on those areas of particular concern to the Congress -- overcoming sex discrimination and sex stereotyping in vocational education programs, assuring availability of vocational training for persons with special educational handicaps, and for person desiring postsecondary vocational education and training.

Although data from the new national vocational education reporting and accounting system (VEDS) were not yet available for this report, data compiled annually and submitted by the States and from research contractors provided the basis for this review. These data were supplemented by descriptive information from State reports compiled by the staff of the Bureau of Occupational and Adult Education.

This report was compiled cooperatively by the staff of the Bureau of Occupational and Adult Education.

Daniel B. Dunham
Deputy Commissioner for
Occupational and Adult Education

OVERVIEW

Public Law 94-482, the Vocational Education Amendments of 1976, provides that the U.S. Commissioner of Education report to the Congress each year on the status of vocational education in the country. Section 112(c) requires that the report include data on the information elements developed in the national vocational education data reporting and accounting system (VEDS) and an analysis of that data. (This will be done when the VEDS data is available.) Also required is a summary of the findings of the reviews and audits performed by the U.S. Office of Education and evaluations conducted by the States.

Summaries of the State evaluations are reported in the annual accountability reports which are due June 30 following the close of the fiscal year. Since these reports were not available to be included in this document, they will be presented in the Commissioner's Report for 1979.

In enacting the Education Amendments of 1976, Congress wished to extend and improve vocational education for the American public. Responsibilities assigned to the Commissioner of Education and to his Deputy Commissioner for Occupational and Adult Education included a mandate to assist States in improving data systems, research, teacher training and evaluation to further program improvement.

The materials in this report are being presented in the same order that they appear in the act and therefore the concerns of Congress, such as sex equity, will be appearing in several areas. This arrangement will provide easy access to the various parts of the law.

An attempt has been made to present an accurate, unbiased report of the status of vocational education in FY 1978 in an orderly format. Because materials have been prepared by several authors, different writing styles will be detected as the reader progresses from one section to another.

Since most changes in education are gradual and would appear insignificant if statistically presented for a single year, most data in this report are displayed from 1972 to 1978 in order to reflect conditions over a 7-year period.

As used in the act, the term vocational education means organized educational programs which are directly related to the preparation of individuals for paid or unpaid employment, or for additional preparation for a career requiring other than a baccalaureate or advanced degree. Thus, vocational education is not a single program. The term is a convenient designation for more than 400 instructional offerings usually grouped under eight major occupational program areas preparing youth and adults for hundreds of occupations. Such programs are available in all 50 States and the territories and outlying areas. In 1978, such programs were offered at high school, post high school, and adult levels in more than 16,000 institutions throughout the Nation.

All data in this report regarding vocational education enrollments, completions, placements and expenditures are obtained from State reports that have been sent annually to the U.S. Office of Education. Although considerable effort has been expended in developing uniform definitions (see Appendix A), States vary in the procedures they utilize in gathering this information from local educational agencies where the instructional programs take place. Because of these variations it is recognized that data from some States more accurately reflect what has happened than in other States. Some State procedures do not fully unduplicate enrollment counts, with the result that national totals may overstate the actual numbers of individuals served. In this connection it should be noted that Federal funds are allocated to States based on census data and and not enrollment reports.

The American public is increasingly interested in acquiring occupational skills for earning a living. More than 16.7 million persons participated in vocational instruction programs in FY 1978. This number represents an increase of 44% over 1972 and an increase of 2.3% over 1977. (See table 1.)

Most rapid enrollment growth during the 1970-78 period occurred in health, occupational home economics, technical, and distributive education. More modest increases characterized consumer and homemaking and agriculture education. (See table 2.)

Offerings in new and emerging occupations such as electronics, medical emergency technology, and law enforcement continue to attract persons seeking such training. (See table 3.)

Major enrollment changes were also apparent in the numbers of women entering some traditionally male vocational programs. Response to the 1976 Amendments with regard to sex equity in program access showed increases in the numbers of women entering such areas as electronics, agriculture, supervisor and management development, and auto mechanics. Moreover, the percentage of males enrolled in consumer and homemaking education and occupational home economics increased between 1972 and 1978. For example, enrollment of males in consumer and homemaking education increased from 8 percent in FY 1972 to 28 percent in FY 1978, while occupational home economics education increased from 15.3 percent in 1972 to 17 percent in 1978.

Extending vocational education to disadvantaged persons, first stipulated in the Vocational Education Act of 1963, was further emphasized in the 1976 Amendments, and special provisions for handicapped and minority students were added. Enrollment of disadvantaged students in vocational programs was about 1.8 million in FY 1978, and handicapped enrollment was over 350,000. Total enrollment of disadvantaged students increased about 11 percent between FY 1972 and FY 1978. Increases in enrollment of handicapped students in vocational education programs has been outstanding -- over 25 percent between 1976 and 1978 and 55 percent between 1972 and 1977 (See table 4.) A probable cause for this increase is the required use of 10 percent of the basic Federal grant to serve the handicapped.

The figures on handicapped and disadvantaged students being served by vocational education should be viewed as minimum estimates. The students who were reported by States were those enrolled in special classes or those who received special services.

Students who were being mainstreamed without services from specially designated funds were not counted.

Increases in the number of minority students enrolled in vocational programs were also reported in FY 1978. More active recruitment of minority students and improvements in guidance and counseling programs

TABLE 1: ENROLLMENT IN VOCATIONAL EDUCATION, BY LEVEL (Program Years 1970-78)

Fiscal Year	Total Enrollment	Secondary	Per-cent	Post-secondary	Per-cent	Adult	Per-cent
1970	8,793,960	5,114,451	50	1,013,426	12	2,666,083	30
1971	10,495,411	6,494,641	62	1,140,943	11	2,859,827	27
1972	11,602,144	7,231,648	63	1,304,092	11	3,066,404	26
1973	12,072,445	7,353,962	61	1,349,731	11	3,368,752	28
1974	13,555,639	8,433,750	62	1,572,779	12	3,549,110	26
1975	15,340,426	9,426,376	62	1,889,946	12	4,024,104	26
1976	15,133,322	8,860,947	59	2,202,800	14	4,069,575	27
1977	16,134,979	9,562,836	59	2,363,194	15	4,208,949	26
1978	16,704,926	10,236,117	61	2,089,170*	13	4,379,639	26

* The 1976 Amendments contained a change of definition regarding postsecondary which shifted reporting of some students to the adult category

ENROLLMENT IN VOCATIONAL EDUCATION

BY LEVEL

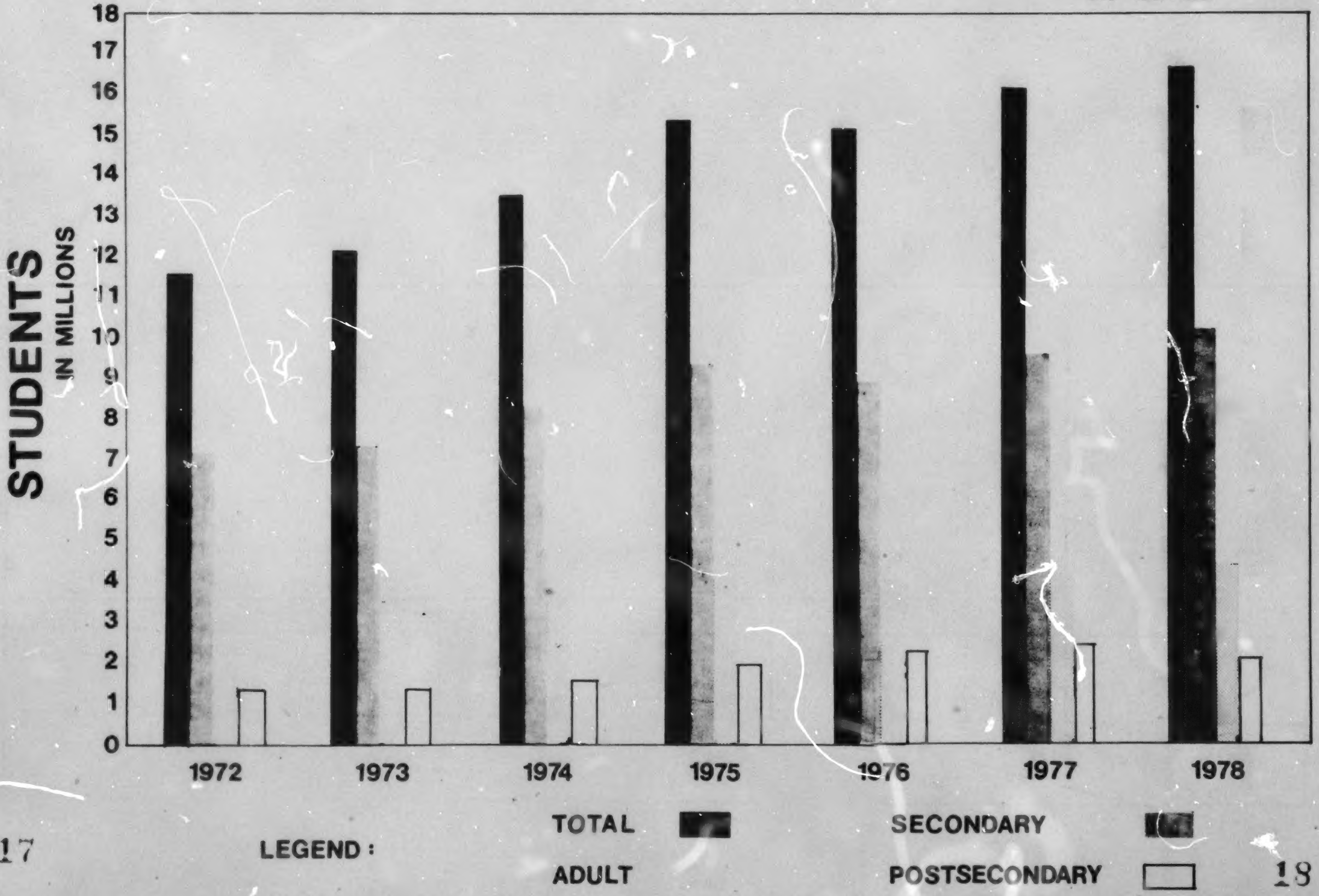


TABLE 2: ENROLLMENTS IN VOCATIONAL EDUCATION, BY PROGRAM (Program Years 1972-78)

Programs	1972	1973	1974	1975	1976	1977	1978
Agriculture	896,460	927,591	976,319	1,012,595	1,059,717	1,056,259	1,006,542
Distributive	640,423	738,547	832,905	873,224	900,604	966,156	962,009
Health	336,652	421,075	504,913	616,638	684,904	740,520	758,808
Consumer & Homemaking	3,165,732	3,193,987	3,206,567	3,283,857	3,515,042	3,652,793	3,659,441
Occupational Home Economics	279,966	322,696	496,117	462,683	471,289	510,816	459,590
Office	2,351,878	2,499,095	2,757,464	2,951,065	3,114,692	3,273,049	3,312,475
Technical	337,069	364,044	392,887	447,336	484,807	519,537	527,681
Trade & Industry	2,397,968	2,702,238	2,824,317	3,016,509	3,109,950	3,246,688	3,402,722
Other	1,304,619	1,114,265	1,803,023	2,821,921	2,004,858	2,496,360	3,509,351

ENROLLMENTS BY PROGRAM FY 72 & 78

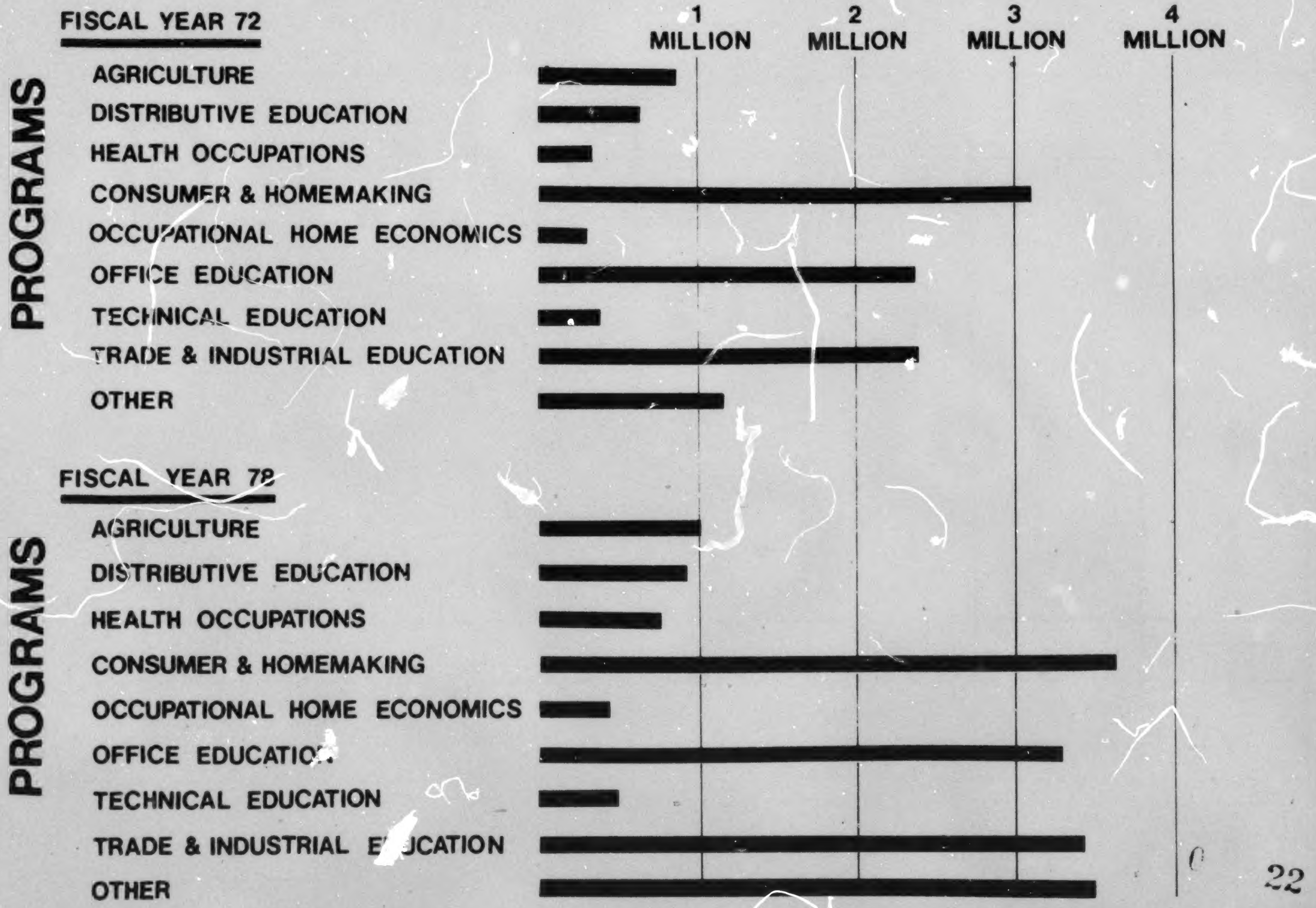


TABLE 3: VOCATIONAL EDUCATION ENROLLMENTS IN NEW AND EMERGING OCCUPATIONS (Program Years 1972 and 1978)

Occupational Area	1972	1978
Surgical technology	--	3,895
Occupational therapy	--	2,531
Nuclear medical technology	--	343
Ophthalmic occupations	--	2,758
Environmental health	--	4,049
Medical emergency tech.	--	88,092
Mortuary science	--	1,513
Fire & safety tech.	8,826	29,147
Electronic occupations	97,936	119,636
Law enforcement training	74,801	104,194

TABLE 4: ENROLLMENT AND PERCENTAGE OF DISADVANTAGED AND HANDICAPPED STUDENTS IN VOCATIONAL EDUCATION

(Program Years 1972-78)

Program year	Disadvantaged	Handicapped
1972	1,616,621	221,342
1973	1,601,634	228,086
1974	1,612,160	234,115
1975	1,742,026	263,064
1976	1,873,411	284,067
1977	1,956,011	344,041
1978	1,794,631	355,269

played an important role in acquainting minority students with opportunities offered by vocational programs. (See table 5.)

In FY 1972, out of all students enrolled in vocational education, 22 percent were from minority groups. In FY 1978, this figure increased slightly to 23 percent. The minorities represented 17 percent of the total population in 1972 and 19 percent in 1978 as reported by the Bureau of Census.

Successful placement of persons completing vocational programs -- a source of pride among vocational educators -- continues to be a major concern of the U.S. Congress. The Vocational Education Act of 1963 focused attention on the employability of students completing vocational programs, and the 1976 Amendments specified the responsibility of the States to evaluate the effectiveness of each program benefiting from Federal funds. The 1976 Amendments require each State to evaluate, by statistically valid sampling techniques, each vocational program which purports to impart entry-level job skills according to the extent to which program completers and leavers find employment in occupations related to their training and are considered by their employers to be well-trained and prepared for employment. Pursuit of additional education or training by program completers or leavers is not to be considered negative in these evaluations.

Although the comprehensive data system required for such evaluations is not yet operational, enough data from on-going reporting are available to provide some insight into what happens to persons completing vocational programs.

Of the nearly 2,250,000 persons who completed secondary, postsecondary, and adult vocational programs in FY 1977, 54 percent were available for employment, 24 percent were not, and the status of 22 percent was unknown. Persons not available for employment included those continuing schooling. Although all vocational education programs prepare students for employment, not all are geared for immediate employment. For example, consumer and homemaking programs prepared students for their unpaid roles as full or part-time homemakers and consumers.

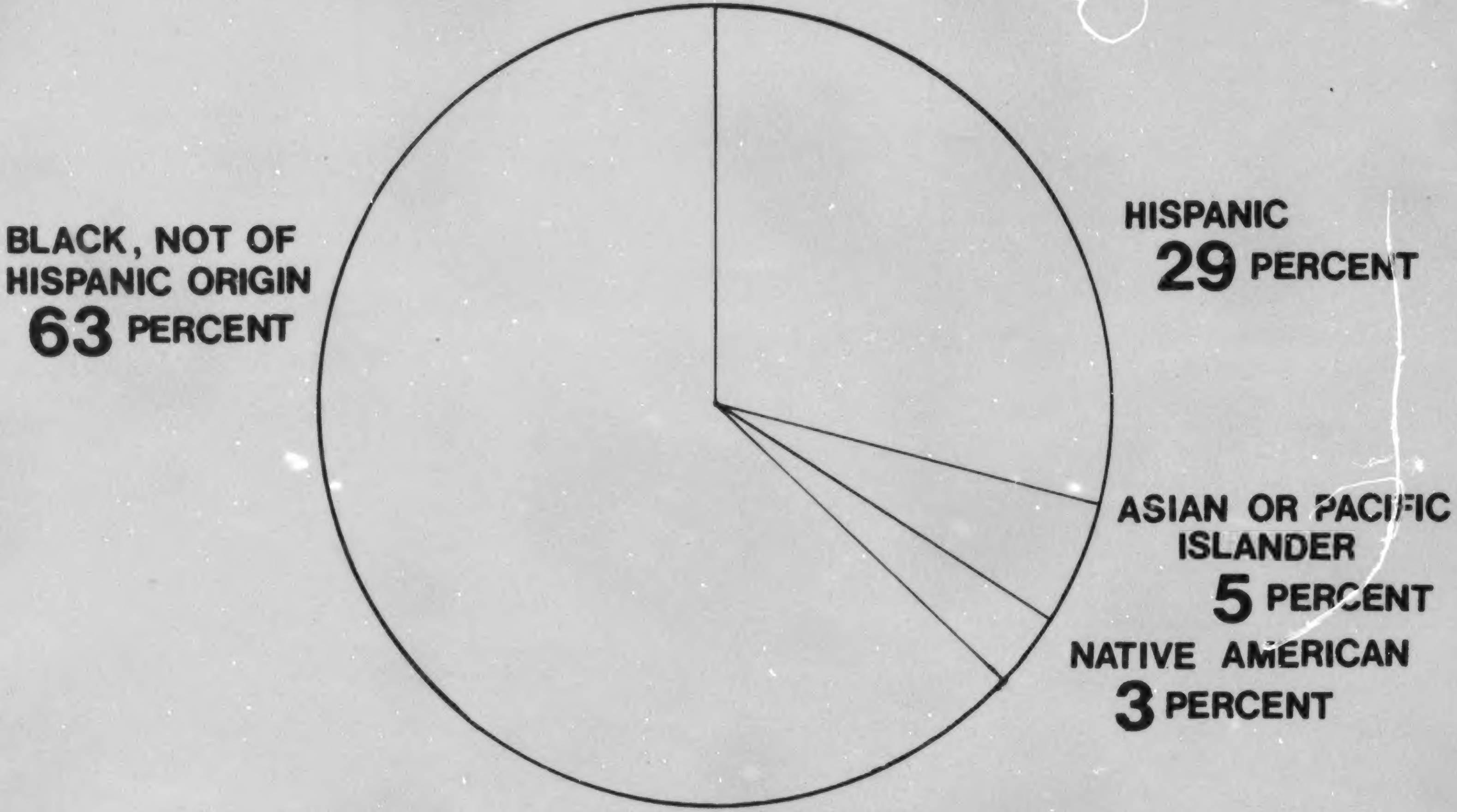
Of those students reported by States as completing vocational education programs and available for work, 90.5 percent were able to acquire jobs. Only 9.5 percent of the 1977 completers seeking work were identified as unemployed in the followup information provided by State agencies.

Appropriations and expenditures for vocational education reached an all-time high of more than $5.6 billion in FY 1978. This increase of nearly 110 percent over 1972 was almost entirely the result of State and local spending. Federal appropriations in FY 1978 totaling $495 million represents an increase from FY 1977 of nearly 8 percent. Federal funds have increased somewhat each year, although the Federal proportion of the total spending for vocational education has been going down consistently since 1972. (See table 6.)

TABLE 5: ENROLLMENT OF MINORITIES IN VOCATIONAL EDUCATION
(Program Years 1972 and 1978)

Minorities	1972	1978	Percentage change
American Indian or Alaskan Native	83,074	112,999	36
Black, not of Hispanic origin	1,660,585	2,425,899	46
Asian or Pacific Islander	98,962	199,543	102
Hispanic	735,516	1,109,169	51

ENROLLMENT OF MINORITIES IN VOCATIONAL EDUCATION



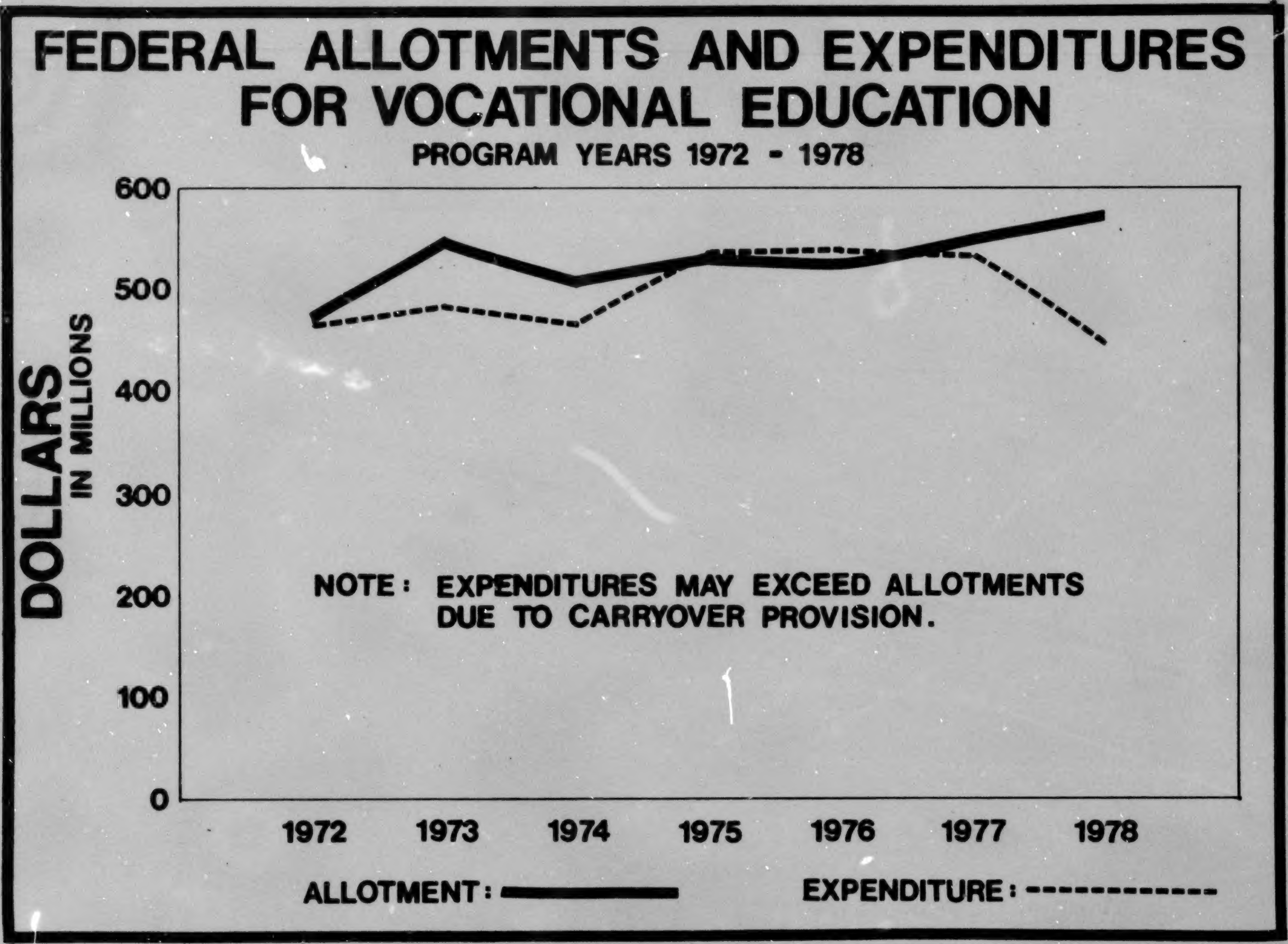
PROGRAM YEAR - 1978

TABLE 6: TOTAL ALLOTMENTS AND EXPENDITURES FOR VOCATIONAL EDUCATION, BY SOURCE OF FUNDS 1/

(Program Years 1972-78)

	1972	1973	1974	1975	1976	1977	1978
				AMOUNT			
Grand total:	2,660,758,658	3,033,657,510	3,433,819,633	4,037,276,685	4,713,576,985	4,962,555,070	5,575,769,885
Fed. allotment:	471,968,455	549,087,455	507,851,455	530,482,455	530,033,555	554,257,282	577,393,865
Federal exp.:	466,029,820	482,390,800	468,196,893	536,139,714	543,210,833	533,610,556	495,405,073
State/local exp.:	2,194,728,838	2,551,266,710	2,965,622,740	3,501,136,971	4,170,366,125	4,428,944,514	5,080,364,812
				PERCENTAGE DISTRIBUTION			
Grand total:	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Federal exp.:	17.5	15.9	13.6	13.3	11.5	10.8	8.9
State/local exp.:	82.5	84.1	86.4	86.7	88.5	89.2	91.1
				DISADVANTAGED			
Fed. allotment:	77,576,519	94,974,519	81,876,269	84,220,919	84,538,112	89,516,322	103,302,662
Federal exp.:	84,539,340	88,194,607	88,832,023	97,032,237	100,990,331	94,263,334	95,069,107
State/local exp.:	128,334,752	155,688,258	158,331,584	183,426,470	221,207,612	247,247,155	402,947,802
				HANDICAPPED			
Fed. allotment:	38,384,346	43,384,346	41,250,846	42,813,946	42,269,056	44,758,161	51,651,331
Federal exp.:	37,899,822	43,234,940	42,304,597	48,224,333	48,562,842	46,046,222	44,769,374
State/local exp.:	26,044,714	46,874,107	36,384,242	56,119,820	71,638,876	76,319,671	187,843,929

1/ It should be noted that Federal allotments have been available to States for expenditures over a 2-year period. Because of this carryover provision, Federal expenditures for some individual years are more or less than the allotments.



FEDERAL ALLOTMENTS AND EXPENDITURES FOR VOCATIONAL EDUCATION

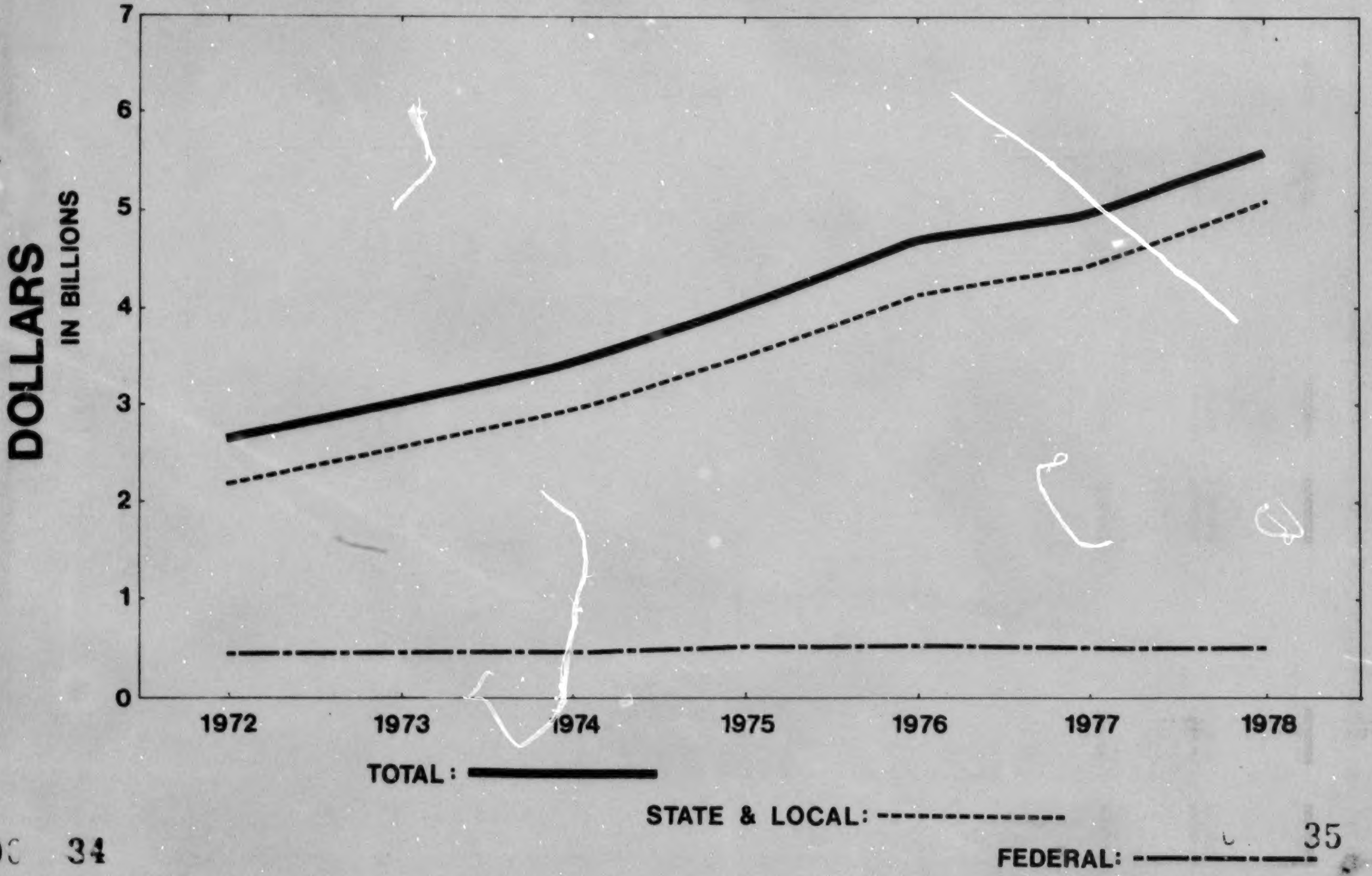
PROGRAM YEARS 1972 - 1978

NOTE: EXPENDITURES MAY EXCEED ALLOTMENTS DUE TO CARRYOVER PROVISION.

EXPENDITURES FOR VOCATIONAL EDUCATION

BY SOURCE OF FUNDS

PROGRAM YEARS 1972 - 1978



STATE VOCATIONAL PROGRAMS

Declaration of Purpose

It is the purpose of Part A of the Education Amendments of 1976 to assist States in improving planning for the use of all resources available to them for vocational education and manpower training by involving a wide range of agencies and individuals concerned with education plans. It is also the purpose of this part to authorize Federal grants to States to assist them:

(1) to extend, improve, and, where necessary, maintain existing programs of vocational education;

(2) to develop new programs of vocational education;

(3) to develop and carry out such programs of vocational education within each State so as to overcome sex discrimination and sex stereotyping in vocational education programs (including programs of homemaking), and thereby furnish equal educational opportunities in vocational education to persons of both sexes; and,

(4) to provide part-time employment for youths who need the earnings from such employment to continue their vocational training on a full-time basis; so that persons of all ages in all communities of the State, those in high school, those who have completed or discontinued their formal education and are preparing to enter the labor market, those who have already entered the labor market, but need to upgrade their skills or learn new ones, those with special educational handicaps, and those in postsecondary schools, will have ready access to vocational training or retraining which is high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training.

Authorizations and Appropriations

Section 102 of P.L. 94-482, the Education Amendments of 1976, sets forth authorization figures for fiscal year 1978 through 1982 for the purposes of carrying out the 5 subparts of the act, and for assisting the States in the administration of vocational education programs, evaluations, and the preparation of the 5-year and annual plans and accountability reports.

The intent of Congress in authorizing the amounts listed in table 7 was to provide an increasing amount of Federal dollars over the years to aid the States in developing quality vocational education programs.

In FY 1978 there was authorized a total of $995 million. Of that amount, Congress actually appropriated $577.5 million, or approximately 58 percent of the authorized amount. This figure represents the lowest appropriation percentage since 1970 when the figure was 54 percent. (See table 7.)

Allotments Among States

Section 103 of the 1976 Amendments authorizes the Commissioner of Education to reserve 5 percent of the appropriation to support the National Occupational Information Coordinating Committee and programs of national significance.

From the amount reserved, the Commissioner is required to transfer not less than $3,000,000 but not more than $5,000,000 in any fiscal year to the National Occupational Information Coordinating Committee (established under Sec. 161). The remainder shall be used by the Commissioner for programs of national significance under subpart 2 of part B.

From the remainder of the appropriation, the Commissioner is authorized to reserve for contracting with Indian tribes an amount based on the percentage of the Indian population aged 15 to 24 is to the total population aged 15 to 24. This sum cannot exceed 1 percent of the funds reserved for the Commissioner of Education.

After the 5 percent reserve, the balance of the appropriation is made available to the States based upon relative youth and adult populations and average personal income. These allotments range from a minimum of $200,000 for a small territory to over $50 million for the largest State.

Contract Program for Indian Tribes and Indian Organizations

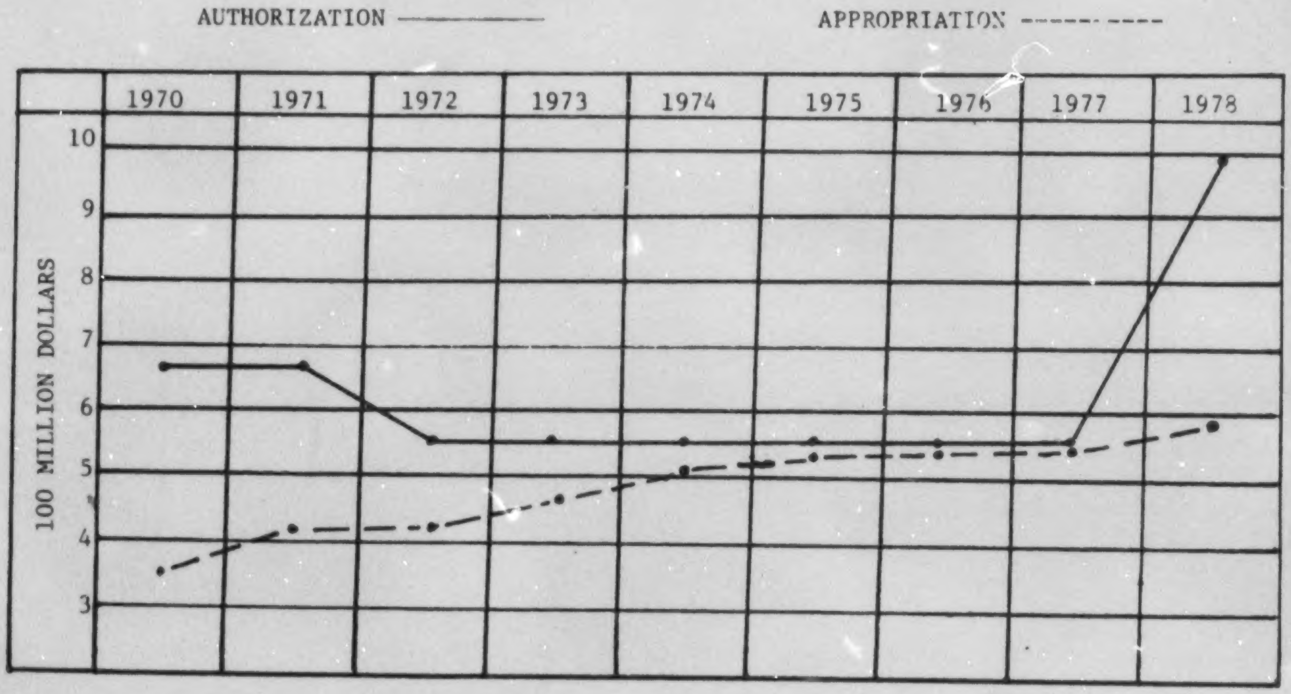
Authorization for the Contract Program for Indian Tribes and Indian Organizations is found in section 103(a)(1)(A) of the Vocational Education Act of 1963, as amended by Public Law 94-482. The program provides opportunities in vocational education for Indian tribes eligible to contract with the Secretary of the Interior under the Indian Self-Determination and Education Assistance Act of 1975 or under the Act of April 16, 1934. Program awards may not exceed 3 years.

Twenty projects in 12 States are serving approximately 1,000 participants at a total cost of $5,183,339. The projects provide a broad range of services to Indian people. Youth and adults are acquiring vocational skills in such areas as media/printing, drafting, data processing, day care services, trades, electronics, automotive and diesel mechanics, plumbing, agriculture, finance and accounting, business education, native arts and crafts, medical services, and law enforcement.

Three projects provide bilingual vocational training for persons of limited-English-speaking ability. They are the Mississippi Band of Choctaw Indians, the Ramah Navajo School Board, and the Kickapoo Tribe of Oklahoma. The Mississippi Band of Choctaw Indians project consists of six components: Management development, wood trades training,

TABLE 7: FUNDS AUTHORIZED AND APPROPRIATED FOR VOCATIONAL EDUCATION (FEDERAL)

YEAR	AUTHORIZATIONS (Millions)	APPROPRIATIONS (Millions)	PERCENTAGE OF AUTHORIZED FUNDS ACTUALLY APPROPRIATED
1970	$675	$365.3	54%
1971	675	412.5	61%
1972	565	417.9	74%
1973	565	478.9	85%
1974	565	507.9	90%
1975	565	530.5	94%
1976	565	534.3	95%
1977	565	559.2	99%
1978	995	577.5	58%



medical training, agriculture/horticulture training, electronics training, and support services. The management development component will serve those persons who wish to become managers in the tribal government or to operate their own businesses. A bilingual instructor and a counselor work closely with the vocational instructors to plan and implement a program of language instruction, personal development, and consumer and career education.

Vocational training activities in two Navajo projects, A School for Me, Inc. and Chinle Valley School for Exceptional Children, address the concerns of mentally/physically handicapped children. A School for Me offers prevocational training in the areas of home care, self help skills, and farm and leisure-time management to mentally/physically handicapped children. Some of the handicapped students also receive training in custodial skills, woodworking, farm management, laundry services, kitchen skills, and consumer education. Training in the Chinle Valley project is designed to produce para-professionals who will be capable of providing rehabilitation services to mentally/physically handicapped Navajo children.

The Cheyenne-Arapaho project in Oklahoma provides vocational training for unskilled, uneducated, and handicapped persons, with special emphasis placed on recruiting the handicapped. Twenty persons are being trained in carpentry, brick masonry, and plumbing. The general office, secretarial, and clerical skills course and the accounting/computing occupational cluster each have 15 enrollees.

The Lummi Indian project in Washington trains persons to help manage tribal water resources. Students are involved in fisheries and shellfish projects or in on-the-job training. Their training is supplemented by instruction in biology, zoology, math, English, fisheries, oceanography, limnology, and other related courses. Those students who successfully complete the 3-year program will receive an AA degree in aquaculture from either the Lummi Indian School of Aquaculture or Whitcom Community College, depending upon their level of achievement.

Some projects are providing in-service training for their staff members. The Central Tribes of the Shawnee Area project concentrates upon improving the recruitment, orientation, and career guidance of persons involved in existing vocational education programs rather than upon the provisions of vocational education itself.

Project funds may be used for program-related construction and support services. On the Wind River Reservation in Wyoming a vocational education facility is being built. Vocational education courses will be offered in the new building during the second and third years of the project's operation. Program support services may include curriculum development, needs assessment, counseling, placement, and followup services for trainees, as well as dissemination of project information.

State Administration

State Boards -- Public Law 94-482 requires each State desiring to participate in the programs authorized by the act to establish or designate, consistent with State law, a State Board or agency which must be the sole State agency responsible for the administration, or for the supervision of the administration, of such programs. As was the case with the previous act (P.L. 90-576), a single responsible State Board was stipulated in order to prevent fragmentation of accountability for the expenditure of both Federal funds and those State and local monies which are required to match such funds and to maintain the State's vocational education effort.

It is important to note that this requirement is balanced by the express intent of the act to involve greater numbers and types of organizations and individuals in the formation of State-level vocational education policy, as well as to make maximum use of all available resources in offering instructional programs (e.g., in coordination with CETA prime sponsors). While the State Board for Vocational Education retains the responsibility for establishing final policy and for certifying this to the U.S. Commissioner of Education, the Board must involve a wide spectrum of representatives in the development of policy and in the planning of programs under that policy.

Except for its coordinative functions in policy development and in designing the State Plans and Accountability Report, as well as its final accountability for the expenditure of Federal funds under the act, the State Board may delegate its authority to administer and supervise programs, in whole or in part, to one or more appropriate State agencies, providing such delegation is specifically proposed and described in the Annual Program Plan and approved by the U.S. Commissioner of Education.

Because of historical differences, variation in State law, and widely varying State needs, there is little homogeneity among the 57 States and Territories in the State governance structures each has chosen to adopt--beyond those common requirements in the act already cited. A recent study conducted by the Westat Corporation for the U.S. Office of Education documents the following variety of State governance structures for vocational education;

> Ten different types of board structures with different compositions and levels of authority over the multiple State agencies to whom some delegation of authority has been made for the administration of vocational education programs.
>
> Five different classes of administrative units with varying degrees of responsibility for vocational education both within the agencies of which they are a part and in other agencies with vocational education responsibilities.
>
> Five different levels of authority over institutions that provide vocational education.

The Westat study cannot be interpreted as recommending certain governance structures as being intrinsically superior to others. At the State Board level, experience has shown that the structural form is far less a determinant of a State vocational program's success than is the degree to which individual board members and State legislators understand and are committed to the concepts of quality vocational education.

At the State agency staff level, however, several States are encountering problems in achieving efficient administration of their vocational education programs, having dispersed their vocational education staffs too widely into a functionally organized structure serving all educational programs within these States. In this connection, it must be noted that the Office of Education is not empowered to challenge such in-state decisions unless and until firm evidence of administrative or programmatic failure is actually forthcoming via State plans, accountability reports, or Management Reviews. Also, under the wording of P.L. 94-482 and accompanying regulations, States are no longer required to list the qualifications of individual State staff positions in their State plans. Whether or not this may have a negative effect on State governance and administration can only be ascertained through long-term study.

While a review of changes made by States in their vocational education governance structures since the 1976 Amendments shows that only five States and Territories made such changes, the planning and evaluation elements of State administration have undergone considerable modification. Each State plan is required to provide ample documentation that the scope of involvement in these activities has broadened to include more effectively the contributions of women, the handicapped, and the disadvantaged; of more representative State and local advisory councils; and of coordination with CETA prime sponsors and industry in general. The impact of this consultation and coordination is required to be detailed in each State plan and, while much more needs to be done, progress is being made toward the goal of changing the State governance of vocational education into a more open process characterized by more realistic planning and greater involvement of the public in all of its phases.

Full-time Personnel and Functions To Eliminate Sex Discrimination and Sex Stereotyping -- The 1976 Amendments place a strong emphasis on the elimination of sex discrimination and sex stereotyping in vocational education. The act reflects this concern in section 101 (3), stating that a purpose of the act is "to authorize Federal grants to States to assist them . . . (3) to develop and carry out such programs of vocational education within each State so as to overcome sex discrimination and sex stereotyping in vocational education programs (including programs of homemaking); and thereby furnish equal educational opportunities in vocational education to persons of both sexes."

Specific provisions for the elimination of discrimination and stereotyping on the basis of sex are included throughout the act, particularly with respect to equal access for persons of both sexes. The act lists nine functions which "sex equity coordinators" must perform, and it requires each State to reserve at least $50,000 each year to support the personnel in carrying out these functions. These provisions were included "to encourage the States to carry out all programs of vocational education in such a manner as to be free from sex discrimination and sex stereotyping and . . . to encourage the States to take vigorous action to overcome sex discrimination and sex stereotyping in vocational education." (Conference Report No. 94-1701, p. 213). A close reading of the legislative history indicates that the intent of these requirements is for sex equity concerns to be a visible part of the entire State operation. Sex equity should be integrated into all programs, policies, and procedures.

Since the implementation of the 1976 legislation, there has been a great deal of activity toward sex equity at the Federal, State, and local levels. Close coordination has developed between Federal and State officials responsible for sex equity activities in order to meet the mandates of the Act. At the Federal level, the Bureau of Occupational and Adult Education has developed policy to lend support to the efforts of the States and, in particular, to the State sex equity coordinators. The Bureau has disseminated this policy to the State Directors of Vocational Education as well as to the sex equity coordinators. This policy includes the following important points: (1) There is a need for the coordinators to have high visibility and access to work across-the-board in all program areas (2) The sex equity coordinators should be involved in the development of State plans (3) The State should take a mainstreaming approach to the development of State activities toward achieving sex equity so that it is not an isolated issue but one of concern to all people in all areas of the State agency (4) A network of the sex equity coordinators is essential to serve as an information exchange and technical assistance resource for the States, to encourage the States to specialize in areas where they are strong and have effective programs, to share information and materials among themselves, and to foster coordination with CETA and other agencies within the States and regions.

To disseminate and support these policies, the Bureau sponsored the first annual workshop of sex equity coordinators in November 1978 at Berkeley Springs. Fifty-one coordinators attended, representing 45 States and one territory. The focus of this conference was the establishment of six regional networks of coordinators. These are now operational, and coordinators are in communication with each other on a regular basis. Each member of a particular network has chosen one or two speciality areas for which she or he will have the responsibility to gather information, share it with other members of the network, and keep up-to-date on any happenings in that specific area. The networks also maintain contact with their Federal liaison, located in the Division of Vocational and Technical Education. Through this contact, the Federal office offers technical assistance to the State in implementing the provisions of the legislation. In addition to the regional networks, the sex equity coordinators have organized their own professional organization, the Vocational Education Equity Council (VEEC) which is a member of the Administrative Division of the Amercian Vocational Association.

At the State level, all States have now assigned at least one person on a permanent basis to work full time in the mandated functions on sex equity. Although the States have already conducted some activity under each of the functions during the year, the States have concentrated their efforts in several areas: creating awareness, providing assistance to local educational agencies, collecting data, and reviewing contracts and grants. In almost all States, the coordinators have run workshops to orient and train State staff, and, in many cases, local administrators, teachers, and counselors in eliminating sex discrimination and sex stereotyping. In Florida, for example, administrators, teachers and counselors participated in a week-long workshop during which they became aware of the subtle influences of stereotyping and discrimination as well as ways to overcome those problems. In turn, those participating agreed to return to their respective schools to conduct similar workshops.

In providing assistance to the local educational agencies, the coordinators have spent most of their time helping the locals develop action plans to eliminate sex discrimination and sex stereotyping from their programs as well as to take positive action to increase opportunities for both males and females in non-traditional instructional areas. For instance, in New York the sex equity coordinator has developed guidelines which have been issued to all of New York's local educational agencies for the development of the annual plan which must be submitted as a part of the local application.

Data collection is an on-going activity which helps the States and the coordinators understand where there might be problems and whether they are making progress. Enrollment figures in particular will be looked to as indicators of progress in achieving sex equity in vocational education. Data has been gathered by each State on the current status of men and women in vocational programs and will be used for comparisons in future years. States also use these data to award incentive grants to locals which have shown progress in the area of non-traditional enrollments. Changes in enrollments, however, will not happen overnight. Significant changes will become apparent perhaps 5 years from now, but comparison of enrollment data from 1972, 1975, 1977, and 1978 indicates that positive changes in traditional enrollment are beginning to occur. The following table 8 shows the percentage of females enrolled nationally in the eight general program areas in vocational education:

TABLE 8: PERCENTAGE OF FEMALE VOCATIONAL EDUCATION ENROLLMENT, BY PROGRAM

	1972	1975	1977	1978
Total	55.3%	42.0%	51.3%	50.4%
Agriculture	5.3%	7.9%	14.9%	17.3%
Distributive	45.2%	34.3%	49.7%	51.4%
Health	84.6%	59.0%	78.2%	77.9%
Consumer & homemaking	92.1%	72.0%	81.6%	80.2%
Occupational home economics	86.0%	52.0%	83.9%	82.4%
Office	76.3%	49.4%	75.1%	75.6%
Technical	9.7%	8.1%	17.0%	17.6%
Trades & industry	11.6%	9.5%	14.4%	15.4%

Based on figures from U.S. Office of Education Summary Data for 1972, 1975, 1977, and 1978.

It should be pointed out that included in the eight general programs are occupational offerings which, by nature of the occupation, will attract a high percentage of students of one sex or the other. For example, cosmetology, although an offering under trades and industry, has been and continues to be predominately female.

State and Local Advisory Councils

The Vocational Education Amendments of 1968 (PL 90-576), as a means of increasing citizen participation in the vocational education decision-making process, required each State to establish a State Advisory Council on Vocational Education (SACVE) as a condition of receiving Federal funds. The SACVEs were charged with the following responsibilities:

1) Advise the State board on the development of and policy matters arising in the administration of the State plan...
2) Evaluate vocational education programs, services, and activities...
3) Prepare and submit an annual evaluation report which (i) evaluates the effectiveness of vocational education programs, services, and activities carried out in the year under review, and (ii) recommends such changes in programs, services, and activities as may be warranted...

One prerequisite for State plan approval is that the plan be developed in consultation with the State Advisory Council. The 1968 Amendments also established categories for SACVE membership in the following four areas: (1) representatives of business, labor, industry and the general public; (2) a number of persons familiar with vocational education programs but not actually involved in it; (3) representatives of vocational education agencies; and, (4) representative(s) of the State comprehensive area manpower planning system. The legislation provided councils with their own operating funds to ensure their financial independence from the State Department of Education.

The Education Amendments of 1976 (PL 94-482) expanded the role of the State Advisory Councils to include the following functions:

a) Advise the State Board in the development of Five-Year State Plan, the Annual Program Plan, and the Accountability Report;
b) Advise the State Board on policy matters;
c) Evaluate vocational education programs, services, and activities;
d) Assist the State Board in planning board evaluations;
e) Prepare an annual evaluation report;
f) Identify the vocational education and employment and training needs of the State;
g) Comment on reports of the State Manpower Services Council;
h) Prepare SACVE annual budget; and,
i) Assist eligible recipients in establishing local advisory committees.

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SACVE responsibilities were thereby increased in terms of State planning, vocational education needs assessment, evaluation, and provision of leadership.

Minimum funding for each SACVE was raised from $50,000 to $75,000 annually effective October 1, 1977. However during the quarter July 1 - September 30, 1977, the minimum funding remained at $50,000, with the remaining three quarters funded at the higher rate. Therefore, the effective minimum funding for FY 1978 was $68,750, and 33 States received this amount. The highest amount awarded was $158,595 to support advisory council operations in each of seven States.

Federal funding for State Advisory Council operations was $5,066,000 in FY 1978, an increase of 189 percent over the FY 1973 allotment.

The Education Amendments of 1976 also expanded State Advisory Council membership to include representatives from 20 specific categories including business, labor, education, and minority interests. Total State Advisory Council membership rose from 1,228 in 1977 to 1,545 in 1978. However the most dramatic increase occured in the representation of women on SACVEs. The number of women on State Advisory Councils increased 234 percent between 1975 and 1978 in comparison to a 31 percent increase in total membership during the same period. Over 35 percent of State Advisory Council membership are educational administrators or staff, 17 percent are from other State agencies, over 20 percent represent business or labor, and the remaining 28 percent represent minority interests, students, professional organizations, homemakers, and retired individuals.

The Education Amendments of 1976 also required creation of local advisory councils to assist LEAs and other eligible recipients in planning and administering local programs. During FY 1978, 11,871 local advisory councils were in operation. Each was composed of representatives of the general public, including at least one representative of business, industry, and labor. Local advisory councils were established for program areas, schools, the community, and the region in which the eligible recipient was located.

General Application

Any State desiring Federal funds must submit through its State Board to the U.S. Commissioner of Education a general application providing assurances that monies will be used in accordance with Federal law and regulations. P.L. 94-482 specifically provides for 10 assurances:

1. That the State provide for proper and efficient methods of administration.

2. That the State Board cooperate with the State Advisory Council on Vocational Education along with other agencies, councils and individuals.

3. That the State comply with requests of the Commissioner of Education for making reports.

4. That funds be distributed on the basis of annual applications
    a. Which are developed in consultation with the local advisory councils and representatives of the educational and training resources available in the area to be served.
    b. Which describe any relations to existing manpower programs under the Comprehensive Employment and Training Act of 1973 and which assure a coordinated approach.
    c. Which describe the Vocational Education needs of potential students in the area and which indicate how the proposed program will meet such needs, as well as build on findings and evaluations of previous programs.
    d. Which describe the relationship between proposed programs (funded under P.L. 94-482) and other programs in the area which are supported by State and local funds.

5. That the State give priority to those applicants which are located in areas of high unemployment and are located in economically depressed areas, and which propose programs new to the area and those designed to meet new and emerging manpower needs.

6. That Federal funds be used to supplement and not supplant State or local funds.

7. That the State provide proper accounting and fiscal control procedures.

8. That funds received under the act not be used for any program which cannot be demonstrated to prepare students for employment.

9. That copies of the State plan and annual program plan, accountability reports, and statements of general policies, rules, regulations and procedures be made available to the public.

10. That funds which constitute the 10 percent allotment to be used to pay the cost of Vocational Education for Handicapped persons be used in consistency with the State plan required to be submitted under the Education of the Handicapped Act.

These assurances represent an updating of provisions of the General Education Provisions Act which applied to the Vocational Education Act of 1963 and the Amendments of 1968. The intent of Congress here was to continue the promissory arrangement between Federal and State governments which guarantees the proper fiscal management and control of public monies.

Since each State must include the assurances listed above in their 5-year plan before they may receive Federal funds, the General Application sections' provisions are met for a 5-year period. There is no need to update or reiterate the assurances yearly.

All States met the requirements of this section when they submitted their 5-year plans in 1977. Therefore, the status of Section 106 in 1978 is unchanged.

Five-Year State Plans and Annual Program Plan

Section 107 of P.L. 94-482 requires a State to submit a 5-year State plan if it desires to receive funds under the act. Section 108 requires an annual update of the 5-year plan.

Prior to the official submission of the program year 1978 State plans, the vocational education personnel in each of the ten regional offices of the Office of Education provided technical assistance to the States during the development of their plans. Regional staff reviewed with the States "draft" copies of their plans and provided suggestions to bring the plans into compliance.

Meanwhile, the central office processed "draft" copies through the interagency review procedures. Appropriate agencies within HEW were invited to review the State plans. Included in the interagency review process were the Bureau of Education for the Handicapped, CETA Coordination Unit, and Non-public Educational Services of the Office of Education, and HEW's Office of Civil Rights. Any recommendation made by the agencies were sent to the regional office to be made a part of the corrected and/or amended plans. The regional staff reviewed the State plans for compliance and completeness prior to forwarding them to the central office with recommendations that the U.S. Commissioner approve the plan.

Following the approval of the plans, the regional staff reviewed them for quality and contacted the States with recommendations that would strengthen the plans and improve the plans to be submitted for the next fiscal year.

Section 107 and 108 of the 1976 Amendments give specified agencies the right to appeal final State board decisions regarding State 5-year plans and annual program plans. The appeals must be filed with the U.S. Commissioner of Education, who delegates a hearing officer to resolve the dispute.

In the summer of 1977, three such appeals were filed. The appeals challenged State plans in Oklahoma, Louisiana, and West Virginia. A hearing officer conducted pre-hearings designed to clarify the issues in Louisiana and Oklahoma. Subsequent to those meetings, the parties negotiated compromise solutions and opted not to proceed to formal hearings. In West Virginia, State officials intervened, and the appeal was withdrawn prior to the pre-hearing.

Although all appeals were resolved without formal hearings, the participants identified several aspects of the appeal procedures that required improvement and elaboration (e.g. duties of parties). Draft guidelines for future State plan appeals were developed to remedy these problems. These guidelines more clearly articulate the duties of parties to an appeal and will be published in the Federal Register.

National Priority Programs

Emphasizing priorities to meet the needs of specific target groups, Congress in the 1976 Amendments specified the groups.

Handicapped -- The participation of handicapped individuals in vocational education has increased significantly during the last 5 years. In 1978, more than 355,269 handicapped students were enrolled in vocational programs. This represents a growth of over 50 percent since 1973, contrasted with an increase of about 33 percent in total vocational enrollment. The largest spurt in growth occurred between 1976 and 1977 when handicapped enrollment increased by over 21 percent while total vocational enrollment increased by slightly over 6 percent.

Most significant enrollment increases for handicapped students occurred in secondary vocational programs which grew by 59 percent between 1973 and 1978, while total secondary enrollment increased by 39 percent. In postsecondary vocational programs enrollment of handicapped also grew during this period but not as rapidly as the total. Whereas total postsecondary enrollment grew by 50 percent, enrollment of handicapped students increased by approximately 13 percent. (See table 9.)

Administration of vocational education programs to assure greater participation of handicapped students has been enhanced by more effective interagency cooperation. Recognizing the need for pooling expertise and resources, Federal agencies concerned with education and related support services for the handicapped have worked together through interagency task forces. Such efforts have also been extended at the State level to improve delivery of vocational education to handicapped students. Over the past year, communication between Federal and State administrators was improved, including a national conference for State level administrators from vocational education, special education and vocational rehabilitation which set as a priority the vocational education of secondary level handicapped students.

The Bureau of Occupational and Adult Education has placed greater emphasis on needs of the handicapped in awarding research grants during 1978. Six research grants totaling $1,184,921 were awarded addressing critical areas affecting participation of handicapped persons in vocational education. These included efforts to develop individualized education programs for handicapped students in vocational education, accessibility to vocational facilities, State planning for delivery of vocational services to handicapped individuals, personnel training requirements, and curriculum modification in vocational education. A media production showing successful mainstreaming efforts in vocational programs is in preparation. Efforts are also underway to improve data to measure the impact of Federal and other efforts to improve vocational education for the handicapped and to evaluate progress.

TABLE 9: ENROLLMENT OF HANDICAPPED PERSONS IN VOCATIONAL, SECONDARY, POSTSECONDARY, AND ADULT PROGRAMS

Year	Total handicapped enrollment	Secondary handicapped enrollment	Postsec. handicapped enrollment	Adult handicapped enrollment
1973	228,086	161,635	30,736	35,715
1974	234,115	182,009	31,193	20,913
1975	263,064	201,168	31,911	29,985
1976	284,065	203,647	38,138	42,280
1977	344,041	259,611	47,224	37,206
1978	355,269	257,237	34,989	63,043

Disadvantaged -- Since 1963, the Congress has specified in vocational education legislation that some of the funds granted to the States be used to assist the disadvantaged -- those with academic, socioeconomic or other handicaps -- to succeed in regular vocational education programs.

In 1963 the language was permissive in that the States, in the use of basic grant funds, "may" use a portion for the disadvantaged and the handicapped. Because the use of funds for these purposes was very limited the Congress made expenditures for these special populations mandatory in the Vocational Education Amendments of 1968. The law required each State to spend 15 percent of its basic grant on special programs or services to help those with academic or socioeconomic handicaps to succeed in vocational education programs. The Federal matching requirement for basic grants included this set-aside provision.

The Vocational Education Amendments of 1976 in Section 110 (b) increased to 20 percent the required set-aside for those who are disadvantaged; However, several important changes were made: (1) the set-aside must be matched; (2) the funds are also to be spent for persons who have limited-English-speaking ability (LESA), and under special circumstances, for stipends; (3) from these funds, the same percentages must be spent on the LESA population ages 15 to 24 as that percentage is to the total State population aged 15 to 24 inclusive: and (4) "disadvantaged" is defined to mean persons who have academic or economic handicaps and require special services and assistance to enable them to succeed in vocational education programs. The set-aside is to be spent only on the excess costs which are over and above those costs for the regular vocational education programs. The Commissioner, as required by the act, developed criteria for determining "academic" and "economic" handicap as part of the regulations.

Section 110 (d) stipulates that, to the maximum extent possible, these set-aside funds should be used to assist individuals to participate in the regular vocational education programs.

The regulations further interpreted the act in two major aspects. The first has been referred to as the "excess cost" policy. It interprets the use of the set-aside funds -- they may be used only for those costs over and above the cost of the regular vocational education programs and include those special services and/or programs which enable students to succeed in the regular program. Separate programs in which only disadvantaged students are enrolled may be set up but only when it is to the benefit of the students and when the staff, instructional materials, and techniques are geared to the special needs of the students.

The second requirement under the regulations seeks to ensure that the disadvantaged students are not short-changed in expenditure or effort. States are required to spend an equal amount or more, as an average, on the disadvantaged as they do on the regular student body. This is determined on a State aggregate basis rather than on a program basis.

There have been difficulties in some States associated with the implementation of Section 110, National Priority Programs. One serious difficulty has been the separate match requirement. Inflation, tax payers' revolts, and the refusal of State legislature to authorize funds for this special purpose have made it difficult for some States and/or the localities to raise the necessary match. Rather than doubling the amount of money for the disadvantaged as expected by the Congress, this provision could result in even less expenditure because of the matching difficulty.

Over half of the States did overmatch the required 50 percent in implementing section 110 b. However, the large number of States which did not match at all indicates a difficulty which must be evaluated.

The States were permitted to operate during 1978 under the April 1977 proposed rules and regulations which stated that the full cost of special programs could be funded from the set-asides. After the regulations were finalized in October 1977, it was agreed that, since the States were already operating in the 1977-78 school year, those which were paying full cost could continue to do so but only until the end of 1978.

The rationale behind the interpretation of the set-aside is that the States should spend their basic grants for all students, but that where some persons require special attention, the services and programs provided would be funded from the set-aside. This would also make more money available to serve more disadvantaged students.

Information from several reports prepared by State advisory committees show that whereas some States have instituted programs and services for the disadvantaged, others are doing little or nothing to assist such persons. Several State advisory committees stated clearly that their State was doing very little about reaching out and serving special needs populations. Several recommended that there be an intensive inservice program for teachers to better prepare them for the non-regular student. Others were critical about the type of courses disadvantaged students were being steered into -- those which will result in low skill levels and a minimal potential for a decent paying job with career potential. Emphasis was put by some advisory committees on the need for improved linkages between vocational education and CETA with recommendations that the staffs work together and utilize the resources to maximize their effectiveness.

Several advisory committees criticized the manner in which the limited-English-speaking ability (LESA) students were being handled. For instance, the Minnesota committee criticized the language in the State plan which suggested that all LESAs would be provided remedial instruction. The committee felt that this implied a learning disability. Rather, according to the committee, the problem was a matter of another language being used. The committee was also concerned that the data used for identifying LESA students was the surnames and objected to this because not all such persons have limited-English-speaking ability.

Despite handicaps of limited funding, matching requirements, and inflexible scheduling, there has been an increase in the number of youths and adults with academic or economic handicaps who have been served by vocational education. In 1978 the total enrollment of persons with special needs was 1,730,508. The extent to which Federal funds authorized under the 1976 Amendments will increase both the quantity and improve quality is still not clear. Vocational education must operate under State restrictions and Federal regulations and does not have the flexibility of related programs such as CETA.

Postsecondary and Adult Education -- Emphasized in the Vocational Education Act of 1963, postsecondary and adult education was re-emphasized as one of the National Priority Programs in the Education Amendments of 1976. Each year States are required to use at least 15 percent of the 103 allotment to pay 50 percent of the cost of vocational education for: (1) persons in programs for which credit is given toward an associate degree; (2) persons already in the labor market, or unemployed, or who have completed or left high school (and are not described as "disadvantaged persons" under the act). The States have, since the beginning of the program in 1963, exceeded the required 15 percent minimum.

The purpose of the postsecondary and adult provision was to authorize the States to provide programs to: (1) prepare technicians and comparable specialists to support scientists and engineers, physicians, lawyers, librarians, and other professions and managers wherever they are needed; (2) to prepare highly skilled workers; and (3) to provide special upgrading and updating education to improve job skills of employed or unemployed adults, or to teach them new skills.

Preparatory programs for technicians and specialists are taught in some area vocational and technical schools which provide programs beyond the twelfth grade, community and junior colleges, technical colleges, area vocational and technical institutes, and divisions of 4-year colleges and universities. Many lead to an associate degree, others to certificates of accomplishment. Specialized short courses or part-time preparatory programs are provided for employed or unemployed adults in regular or evening programs in these institutions or wherever the educational service may be best provided.

The postsecondary and adult occupational programs supported under the Vocational Education Act are only a part of the Nation's delivery system for such programs. A large number of nonpublic proprietary or nonprofit institutions provide specialized postsecondary occupational education. These are private business schools and colleges, trade and technical schools, and other specialized institutions including religious schools and private hospitals.

Although the law and the regulations authorize the use of Federal funds for contracting for vocational programs with the private non-profit or profit schools, the current reporting system does not elicit sufficient information to indicate the extent to which States are carrying out this authority. Empirical evidence suggests that very few vocational Federal dollars are finding their way into such schools. Evidence also suggests that in the development of State plans, the trained supply for the labor market accommodated by the non-public schools may not be taken adequately into account, particularly at the postsecondary level. Little is also known about whether public schools use the same labor market data in planning programs, as that used by non-public schools.

Biennially the National Center for Education Statistics surveys the occupational offerings in the non-collegiate postsecondary schools of the country. The 1978 survey shows that there were 9,337 postsecondary schools in the United States with occupational programs. Of this number, 1,955 were public schools by definition, with 5.948 being proprietary schools and 1,434 identified as private non-profit. The proprietary and non-profit schools enroll in aggregate about 99,805 students. In addition, significant occupational education is provided in the various branches of the military services, Justice and Commerce Departments, and Department of Labor. Finally, the training programs provided by private industrial or institutional employers or internal programs for employees of Federal, State, and local government agencies comprise a part of the total system.

In 1978, 38.7 percent of the total vocational enrollments were in postsecondary and adult programs, accounting for 27 percent of the combined Federal, State, and local expenditures, and 38.1 percent of the Federal expenditures.

Combined postsecondary and adult enrollment reached 6.5 million in 1978, an increase of more than 50 percent over 1972. Postsecondary preparatory programs almost doubled between 1972 and 1978. Enrollment in adult education programs also increased by 37 percent during this period.

Substantial numbers of persons are served by postsecondary and adult programs in all of the occupational fields. Office occupations and trade and industrial programs account for the largest numbers. (See table 10.)

Federal Evaluations -- The first quality review of State Plans of Vocational Education as required of the Commissioner of Education by Section 112 of the Education Amendments of 1976 were made in FY 1978 by the Vocational Education Program staff in the 10 Regional Offices. In order to provide a uniform basis for the development of the review, key questions were prepared in four specific areas -- non-discrimination, data, evaluation, and comprehensive planning. On professional judgement and particular knowledge of the States staff based their qualitative and analytical comments.

In addition to the State plan, other sources were considered in the preparation of each quality review. These included the reports of the State Advisory Councils on Vocational Education, Annual Vocational Education Reports, findings of the Management Evaluation Reviews for Compliance/Quality, technical reviews conducted by program staff, audit findings, and other pertinent, descriptive State information.

Each content area was divided into two sections, with observations followed by suggestions for improvement and/or commendations of exemplary policies, procedures, and practices employed by the States. The suggestions were to be used by the States as specific aids towards the improvement of their plans and programs of vocational education.

The specific areas addressed in every quality review included subcategories as well. Thus, non-discrimination included sex fairness and special populations; data treated terms of data management, collection, dissemination, and utilization; evaluation dealt with process and product at the State and local levels, and comprehensive planning discussed the involvement of the planning committee and an established planning system. Several quality reviews addressed the distribution of funds and local applications as seperate topics; still others included format, budget summary, and the research coordinating unit as individual topics of consideration.

TABLE 10: POSTSECONDARY AND ADULT ENROLLMENTS, BY PROGRAM (PROGRAM YEAR 1978)

Program	Postsecondary		Adult	
	Number	Percent of Total	Number	Percent of Total
Total of all programs	2,089,170	100.0	4,379,639	100.0
Agriculture	57,538	2.8	233,732	5.3
Distribution	248,109	11.9	316,471	7.2
Health	233,279	11.2	393,622	9.0
Occup. home econ.	74,228	3.6	132,796	3.0
Office	639,863	30.2	737,890	16.8
Technical	330,441	15.8	157,967	3.6
Trade & industries	423,506	20.3	1,509,388	34.5
Other	82,306	4.2	897,773	79.4

Letters describing the results of these reviews were sent to most States by Jan. 31, 1978, to guide them in making improvements in future State plans. Delays occurred for several States due to the late approvability of their State plans, thereby forcing the postponement of the development of the quality review. Other intervening factors included delay of the final publication of the Vocational Education Rules and Regulations until after the beginning of the new fiscal year, and the initiation of new policies and practices at both the State and Federal levels in response to the new legislation. Nevertheless, the start on quality reviews was made and they are being continued in accordance with the legislation.

Management Evaluation Review for Compliance/Quality

In addition to the reviews of State plans, section 112 of the Amendments of 1976 also mandates that the Bureau of Occupational and Adult Education (BOAE) shall, "in at least ten States annually, ... conduct a review analyzing the strengths and weaknesses of the programs assisted with federal funds..." Such a review is to be conducted in all States and extraterritorial jurisdictions commencing in Fiscal Year 1978 and running through Fiscal Year 1982.

Accordingly, the Bureau of Occupational and Adult Education has developed and implemented a process called Management Evaluation Review for Compliance/Quality (MERC/Q). Its principal purpose is to obtain a measure of each State's capacity for and performance in conducting vocational programs under the Vocational Education Act of 1963 and subsequent amendments. On-site reviews are conducted to assess the extent to which the States are following their approved State plan and to determine the degree to which operating procedures and practices are in compliance with existing laws and relevant regulations.

To accomplish the above, appropriate regulations have been analyzed and divided into meaningful categories; e.g., fiscal, program purposes, planning, and evaluation, are reviewed in each State, and collectively comprise what is known as the "core." All other regulations are assigned to a pool from which a predetermined number is randomly selected for review in each State.

Approximately 6 weeks prior to the actual on-site review, a member of the Management Evaluation Review unit visits the State to be reviewed. The purpose of this "pre-visit" is to explain the intent of the review and related procedures, to provide the State with the regulations from the core and pool items to be examined during the on-site visit, and to answer questions of State staff. State personnel are also encouraged to use the time between the pre-visit and the on-site team review to prepare appropriate materials regarding compliance with the regulations.

The actual site visit, lasting 1 week, consists of a review team analyzing written evidence to determine if the State is meeting the intent of the regulations being examined. The team consists of members from the Bureau of Occupational and Adult Education, the National Advisory Council on Vocational Education, and the State directors from both vocational and adult education from a State to be reviewed in the near future. The Chairman of the review team meets daily with State staff to present the results of the previous day's review, thereby insuring that the State has the complete preliminary results of the review by week's end. The final official activity during the review week is the exit conference, wherein the review finding are summarized and procedures for rectifying deficiencies are finalized. A final "official" report is sent to the State later.

Since its inception in the spring of 1976, the scope of MERC/Q has expanded considerably. In addition to a compliance review of the administration of vocational education programs in the States, several other programmatic and legislative areas are examined for conformity with related statutes and regulations. These areas include adult education, section 112 of the Comprehensive Employment Training Act, title IX (sex discrimination), and section 504 of the Rehabilitation Act (handicap discrimination).

The assessment of administrative and programmatic quality of vocational education at the State level is a recent supplement to the above described compliance portion of the Bureau's review and adds an additional dimension to the overall strength and weakness analysis. Unlike compliance, however, the assessment of quality is not restricted to legal conformity with the Federal legislative mandates. Rather it is designed to document those practices which reflect quality performance beyond a required compliance level and to provide recommendations for those areas which are in need of strengthening.

Table 11 represents a summary of findings for the total compliance portion of the MERC/Q for 12 reviews conducted during Fiscal Year 1978. It can be seen that the average compliance rate among the 12 States was 80.9 percent. That is, analyzed documentation verified that the States examined were meeting the minimum requirements of the regulations in four out of five instances.

A finding of noncompliance resulted in 6.0 percent of the instances of review. The rate of noncompliance varied from 11.1 percent to 2.6 percent.

Where no compliance determination could be made, a "to-be-determined" finding was given. This occured 13 percent of the time and was primarily due to the fact that State evaluations occured shortly after implementation of the new vocational regulations. Because of this, many of the States were not able to complete the requirements regarding certain regulations by the time of the on-site review.

Approximately 17 percent of the items included as part of the review package were judged to be non-applicable for a given State. In most instances this was because a check of documentation showed that the State had not allocated Federal or State/local matching funds for those areas or activities for which such funds could but did not have to be expended.

Changes in the items examined per State resulted from experience with, and comprehension of, the new vocational regulations. Revisions also resulted from an additional title IX review required for adult education in those States in which there were separate governing boards for vocational and adult education. The mid-year addition of the section 504 and General Provisions packages caused further revisions.

TABLE 11: SUMMARY OF COMPLIANCE FINDINGS (Program Year 1978)

	Number of items	Number non-applicable	Number applicable	In compliance		In-non-compliance		To-be-determined	
				Number	Percent	Number	Percent	Number	Percent
Alabama	243	31	212	178	84.0	8	3.8	26	12.2
Georgia	247	22	225	182	80.9	25	11.1	18	8.0
Guam	179	54	125	78	62.4	7	5.6	40	32.0
Hawaii	195	55	140	110	78.6	7	5.0	23	16.4
Maryland	226	39	187	151	80.7	10	5.3	26	14.0
Massachusetts	168	23	145	119	82.1	6	4.1	20	13.8
Minnesota	223	20	203	163	80.3	11	5.4	29	14.3
New Mexico	243	43	200	159	79.5	20	10.0	21	10.5
North Dakota	242	49	193	161	83.4	8	4.1	24	12.5
Oregon	227	36	191	162	84.8	5	2.6	24	12.6
South Dakota	240	42	198	157	79.3	10	5.1	31	15.6
Virgina Islands	173	29	144	130	90.3	12	8.3	2	1.4
TOTAL	2606	443	2163	1750	80.9	129	6.0	284	13.1
X	217	37	180	146	81.1	10	5.5	24	13.4

The total compliance portion of the MERC/Q for Fiscal Year 1978, categorized by programmatic and regulatory areas, is presented in Table 12. The complete figures for each of the five major categories of the compliance portion of the review are also included.

Compliance with the regulations was, on the whole, very high. For vocational education, the compliance rate among the 12 States reviewed averaged to 74.6 percent. This was slightly less than the average of 80.9 percent for the five major categories as shown in Table 12.

Overall, there was 413 outstanding items during 1978. Of these, 284 are awaiting a final compliance determination, and 129 are non-compliant. Each of these is being tracked by Bureau staff until a final complaince determination is made in each instance. It is anticipated that all will become complaint with the submission of the fiscal year financial and other annual reports and the first accountability report by the States which is due June 30, 1979. In the meantime, technical assistance is being provided to bring all items into compliance.

Results from the title IX portion of the compliance reviews indicate that much work has to be done in this relatively new area. Nearly one out of every five items reviewed was found either to be in non-compliance or to have such a potential existing. While some of the States were found to be in complete compliance concerning the title IX items reviewed, the compliance rate dropped to as low as 50 percent in other instances.

Further, there seemed to be a consistency in the areas of non-compliance which were uncovered, namely a failure to: (1) complete the required self-evaluation; (2) develop and implement a remedial action plan based on the results of the self-evaluation; (3) notify the public that the State is a non-discriminatory agency regarding sex equity; (4) eliminate sex-bias and sex-stereotyping in State-issued publications; and (5) provide procedures to insure that all guidance and counseling materials used by State institutions are also free of sex bias and stereotyping.

States fared no better regarding section 504 of the Rehabilitation Act. In only slightly more than half of the items reviewed was a compliance finding rendered, and in no one instance was any State found to be fully in compliance.

Further, in most of the eighty instances where an assessment was made of present conditions rather than a compliance judgement rendered, the analysis seems to show that the States are deficient in their responsibility to provide equitable access to vocational programs for handicapped persons.

There are other persistent problems in vocational and adult education besides a failure to implement Civil Rights requirements. Late reporting of annual financial status and performance reports (sections 100b.403 and 100b.432) and failure to monitor the membership of advisory councils (section 104.111) were the most common areas of negligence in vocational education. Proper coordination with required groups in programmatic development (section 166.139) and failure to provide financial reports by required due dates (section 166.47/1/ and /2/) were the most frequent non-compliance areas in adult education.

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TABLE 12: SUMMARY OF TOTAL COMPLIANCE, BY AREA

	Number of items	Number non-applicable	Number applicable	In compliance		In non-compliance		To-be-determined	
				Number	Percent	Number	Percent	Number	Percent
Vocational education	1526	232	1294	966	74.6	62	4.8	266	20.7
Adult education	590	147	443	414	93.5	25	5.6	4	.9
CETA	217	23	194	193	99.5	1	.5	--	--
Title IX	216	31	185	151	81.6	30	16.2	4	2.2
Section 504 1/	57	10	47	26	55.3	11	23.4	10	21.3
TOTALS:	2606	443	2163	1750	80.9	129	6.0	284	13.3

1/ An additional 80 items were assessed but no compliance determinations were made. This was due to a need for policy from the Office of Civil Rights on those issues befor compliance can be determined.

During Fiscal Year 1978, the review instruments for assessing the quality of State planning procedures and student followup procedures were utilized in on-site-reviews in the States of Alabama, Georgia, Maryland, Minnesota, New Mexico, North Dakota, Oregon, and South Dakota. A total of 50 recommendations for improving planning procedures were made to the eight States during the on-site-reviews.

Although not applicable in all instances, there is an indicated need among the States in planning for vocational education to: (1) develop an overall policy and philosophy pertinent to vocational education; (2) ascertain more fully the vocational education needs of target populations; (3) cooperate with other agencies to assure identification of goals important to the development of programs; and (4) provide eligible recipients with more exact data on current manpower needs and supply.

In regard to followup of students who have completed or left vocational education programs, there is a need among the States to: (1) widely disseminate to the general public reliable and valid data regarding the accomplishments of students; (2) provide better identification of handicapped and disadvantaged persons, as well as the racial make-up of the State; (3) explore ways through which more employers can be involved in the followup evaluation process; and (4) make better use of data secured through the followup process to improve the effectiveness of vocational education programs.

Followup activities for civil rights compliances have been successful in remediating problem areas. States have responded to recommendations provided by the review team with corrective action. These actions have ranged from developing and implementing self-evaluation studies to include statements of non-discrimination in publications and recruitment materials.

Concurrent with the evaluation of vocational programs to be conducted each year in at least 10 States, the HEW Audit Agency is to conduct audits in each of these States.

During FY 1978 15 audits of State activities in 12 States and/or territories were conducted. The localities audited were:

Alabama
Alaska
Hawaii
Maryland
Montana
New York
North Dakota
Pennsylvania
Puerto Rico
South Dakota
Virgin Islands
Washington

One of the audits is not yet finalized, and five did not involve monetary exceptions.

One of the audits involved the retrieval of $1.9 million in unused Federal funds.

In the case of eight audits BOAE sustained audit exceptions amounting to $2,232,748.50.

Six of the audits were conducted in connection with section 112 (a)(2) requirements. There was no uniformity or pattern to the exceptions. The major problem area was the inability of States to show an audit trail that documented expenditures.

State Evaluation -- The Vocational Education Amendments of 1976 also mandate that States evaluate their vocational education programs. These requirements focus on State evaluation of the effectiveness of vocational programs, employer satisfaction with vocational graduates, and followup of graduates.

More specifically, each State must evaluate, during the 5-year period of the State plan, the effectiveness of each program within the State which is assisted with Federal vocational funds. The regulations require that these evaluations be undertaken in terms of the planning and operating process, student achievement, the duration of graduate employment, and the results of additional services to special populations such as women, minority groups, handicapped persons, disadvantaged persons, and persons of limited-English-speaking ability. Although the regulations mandate three general areas of evaluation to be covered, the criteria listed under each category are suggestive rather than mandatory. The States may, therefore, use both specific evaluation procedures and criteria which they believe are valid for their particular situation. State evaluation plans are often described in both the 5-year and annual plans. The State Advisory Councils assist the State Boards for Vocational Education in developing plans for these State evaluations.

In obtaining followup data on program completers and leavers, the States will cooperate with the National Center for Education Statistics (NCES) by participating in the Vocational Education Data System (VEDS). In order to assure compatible data, all the States are using the information elements and uniform definitions developed by NCES.

The results of the first evaluations, which focus on 1978 programs, will be summarized in the first Annual Accountability Report, which is due July 1, 1979. The evaluation results will become the basis for program revision and improvement by the States. Each State will share its evaluation results with its State Advisory Council on Vocational Education.

The evaluation system of two States -- Illinois and Wisconsin -- is given below by way of illustration:

The Illinois Department of Adult, Vocational and Technical Education, during the years 1978 through 1982, is using an evaluation system whereby the Department staff coordinates and/or conducts an evaluation of the effectiveness of the vocational education program of each local education agency within the State assisted with funds available under the Vocational Education Act. A part of the evaluation system consists of an on-site evaluation of all vocational education programs in one-fifth of the local education agencies each year. In addition, all programs submitted by local education agencies through the Local Plan for Occupational Education are evaluated annually and approved by Department staff as part of the Department's evaluation system

The Illinois evaluation system also includes evaluating each project assisted with funds available under subpart 3 of the Vocational Education Act. Each project proposal funded under subpart 3 must include an evaluation component. Moreover, the Department staff evaluates the projects in terms of one or more of the following factors: (1) the impact of the project on local programs of vocational education; (2) the extent to which the project results in improved vocational education teaching techniques and/or curriculum materials; (3) the extent to which the product has national and/or State-wide applicability; (4) the extent to which the product meets the needs of specific target groups and/or meets the needs in particular target areas of the State; (5) the extent to which the project has addressed the need for elimination of race and sex bias in vocational education and has provided support for equal educational opportunity; and (6) the extent to which the project and/or product has contributed to achievement of the goals of the 5-Year State Plan for Vocational Education.

The Department utilizes the results of program and project evaluations in the determination of priorities for the utilization of human and fiscal resources, in revising the State's programs, and in refining Department goals and objectives.

In Wisconsin, secondary vocational education programs are administered by the Department of Public Instruction while the postsecondary and adult programs are administered by the Wisconsin Board for Vocational, Technical and Adult Education. The responsibility for evaluating vocational education programs is also divided between these adminstrative divisions.

At the secondary school level, each program will be evaluated on an annual basis as part of the local program plan and evaluation. State staff supervisors review the local evaluations as a means of assisting in the development of strategies for program improvement. In addition, each local secondary vocational education program will be evaluated at least once each 5 years through a program of combined self and external evaluation based on criteria established by and under the general supervision of State staff supervisors, and based on local and State program objectives.

Postsecondary and adult vocational education programs formally organized with Federal, State, and local funds will be evaluated at least once during the 5-year period covered by the State plan--1978 through 1982--by the State Board. The evaluation assesses the effectiveness of each program in quantitative terms concerning: (1) planning and operational processes such as the quality and availability of instructional offerings; guidance, counseling and placement services; capacity and condition of facilities and equipment; employer participation in cooperative programs; teacher/student ratios; and teacher qualifications; (2) results of student achievement; (3) results of student employment success; and (4) results as measured by services to special populations. The evaluation results are used to revise the programs conducted under the State's 5-Year and Annual Program Plan.

Basic Grants

Under "Subpart 2 - Basic Grant", the Commissioner of Education is authorized to make grants to the States to assist them in conducting vocational education programs. Such grants may be used in accordance with approved State plans for 16 major purposes.

Section 110 requires States to use at least 10 percent of the Basic Grant and Program Improvement funds to serve handicapped students, at least 20 percent to serve disadvantaged students and at least 15 percent to serve postsecondary and adult students. Expenditures for these national priorities may be made under any or all of the 16 legislative purposes.

Vocational Education Programs - Many changes have taken place in vocational education programs since the Amendments of 1968 and 1972. The following brief summary highlights some of these changes in each of seven major program areas. Consumer and Homemaking will be reported on later.

Agriculture - Many significant transitions and developments have taken place in vocational agriculture education during the 1970's. The instructional programs have been broadened to include training for employment in both production agriculture and the related agribusiness occupations, including renewable natural resources and environmental occupations. (See table 13.) During the 1970's a national committee of 52 persons from 40 States identified, validated, and published, with the help of practitioners, essential competencies for entry and advancement in 196 agriculture and agribusiness occupations. As a result of this major effort, a transition to competency based curriculums soon will be adopted nationwide.

Competencies as a basis for curriculum development in 196 agriculture related occupations recently have been identified, validated, printed and 9,000 copies distributed to States and local schools. South Carolina, for example, has begun a state-wide thrust to competency based curriculums in virtually all agriculture-agribusiness courses. Instructional materials are being changed to this concept and progress of students is being measured in terms of skills/competencies acquired.

Employment opportunities in production agriculture and agribusiness have been identified and validated during the 1970's. This pioneer effort by a U.S. Interdepartmental Committee, using data from the 1970 U.S. Census, identified 108 major occupations as agriculture or agribusiness with employment of such agriculturally trained personnel showing up in 195 of the 201 industries surveyed. Approximately 7 ½ million persons utilize agriculture/agribusiness competencies in their employment. The information in this study is now available for use as a manpower base in planning, developing, and maintaining vocational education programs. The Interdepartmental Committee is currently working on projections of the employment data to 1985. The needs of people in target groups are beginning to be met. North Carolina reports that a major objective of vocational agriculture is to identify the severely disadvantaged and handicapped students and to provide specialized instruction and services for them. Ninety teachers identified and enrolled over 1,000 such students in 1978. Most of these students were mainstreamed into classes with the regular students but provided extra individual instruction and followup through the calendar year.

Prior to 1972, instruction in agriculture was offered chiefly to males. By 1978 approximately 173,660 females were enrolled, an increase of 17,660 over the previous year, and the number is increasing. In addition, employment opportunities in agriculture/agribusiness for women are showing signs of expansion.

TABLE 13: ENROLLMENT RELATED DATA IN AGRICULTURE/AGRIBUSINESS, BY LEVEL AND TYPE OF PROGRAM

(Program Years 1972-78)

Programs	Enrollment trends				
	1972	1974	1976	1977	1978
1. Secondary school					
a. Production agriculture	342,729	328,713	339,192	353,514	341,399
b. Agribusiness	260,595	331,585	372,992	366,995	373,873
AG supplies/services	(19,348)	(22,919)	(21,506)	(21,486)	(23,846)
AG mechanics	(98,358)	(106,474)	(114,276)	(108,099)	(108,634)
AG products processing	(7,726)	(7,566)	(12,296)	(9,517)	(8,974)
Ornamental horticulture	(38,256)	(55,865)	(75,328)	(78,802)	(83,923)
Renewable natural resources	(16,997)	(15,231)	(19,270)	(19,035)	(17,253)
Forestry	(13,969)	(16,299)	(15,991)	(15,044)	(17,822)
Other	65,941	107,231	114,325	115,012	113,822
TOTAL (a and b)	603,324	660,298	712,184	720,509	715,272
2. Postsecondary					
Number institutions	401	450	478	513	513
Number students	34,924	47,458	67,663	73,597	57,538
3. Adult education	258,212	269,545	279,870	262,153	233,732

In 1963 and prior to the new legislation, agricultural instruction was offered principally in rural schools for rural people. By 1978, however, over 30 percent of the total secondary enrollment was from small towns and cities. In 1978, 49 of the Nation's 50 largest cities provided vocational education in one or more of the major agriculture/agribusiness occupations.

Work/employment experiences are being provided to students in virtually all agriculture and agribusiness occupations by involving them in some type of occupational experience outside of the classroom.

The national student organization, Future Farmers of America (FFA) has been modified to further improve its effectiveness as a teaching media. Approximately 98.5 percent of all schools offering instruction in agriculture/agribusiness have FFA chapters, and 75 percent of all students are involved in FFA.

Preservice and inservice teacher education is striving to provide a supply of well trained teachers and to keep them updated. There is a critical shortage of teachers of agriculture and agribusiness occupations. The shortage is due to the fact that individuals trained as teachers are in great demand by public and private agencies and industries at higher salaries. Teachers are now being recruited and trained by 83 colleges, with at least one such college located in all States except Hawaii and Alaska. Recent innovations in teacher preparation include:

- Movement toward more specialized preparation in an occupational field, such as agricultural mechanics, ornamental horticulture, dairy production, and forestry, rather than in "general agriculture."
- Inservice workshops, seminars and short courses are being conducted to keep teachers abreast with technology, management skills, domestic and international markets, FFA, adult education and with employment needs and opportunities.
- Trends are toward competency-based teacher certification.
- Program evaluation is based on previously developed standards of high quality instruction.

Instructional programs for young farmers in agriculture/agribusiness are available in about half the States and is increasing despite the gradual downward trend in other adult vocational education programs in agriculture and agribusiness. Many of those who were formally classified as "adults" are now enrolled in postsecondary programs. Postsecondary programs in agriculture/agribusiness have developed at an impressive rate. The number of institutions offering programs in agriculture/agribusiness has increased rapidly. (See table 13.) Most postsecondary institutions report more employment opportunities and job offers than graduates to fill them. Starting salaries in many cases equal those of 4-year college graduates.

Exploratory programs in agriculture/agribusiness occupations are being offered in grades 7 and 8 in 24 States. Curriculum guides and teaching materials appropriate for 7th and 8th grade students are now available in each of the seven specialized occupational areas in agriculture/agribusiness.

Local vocational agriculture teachers in some States are advising and assisting elementary teachers in offering career awareness programs in agriculture. During the 1970's, career awareness curriculum guides and teaching materials for use by elementary teachers were prepared under Office of Education contract in each of seven instructional areas in agriculture/agribusiness.

Of the 1,006,342 students enrolled in agriculture/agribusiness courses in 1978, 181,000 completed and were available for the labor market or continuing education. An estimated 6,000 of those who completed were graduates of 2-year postsecondary programs. Estimates suggest that this number is far short of meeting the annual replacement needs for over 630,000 workers in the agriculture/agribusiness industry who utilize agriculture/agribusiness competencies.

Distributive Education -- This program area provides multiple instructional programs to accommodate the preparation of persons for a wide range of sales and marketing occupations.

Historically, Federal vocational legislation in 1936 authorized funds specifically for distributive occupations, identifying the client group as those employed in such occupations. This limitation resulted in the development of cooperative part-time training programs for in-school youth and supplementary training for employed adults. Most of the early training was directed to those in the retail and wholesale trade. The Vocational Education Act of 1963, P.L. 88-210, specifically provided for the inclusion of persons not employed, thereby setting the stage for expanded service to more people. Subsequent amendments in 1968 and 1976 increased the capacity of distributive education to be more responsive to employment needs in marketing and the social priorities highlighted in the legislation.

Distributive education relates to [illegible] major segment of the labor force. Because of the ubiquitous nature of distribution in the economy, opportunities for employment in marketing goods and services exist in every community. The U.S. Department of Labor has interpreted the marketing sector as involving one out of every six workers. Half are in wholesale and retail trade; the other half in a variety of other industries.

Enrollment in distributive education in 1978 was 962,009, which was 50 percent over 1972. Secondary enrollment represented 41.3 percent of the total enrollment; postsecondary, 25.8 percent and adult, 32.9 percent. (See table 14.)

Of the number in preparatory training, 29.0 percent, or 279,720 completed training in 1978. State followup reports indicate that about 30 percent of known completions, an estimated 100,000 persons, were immediately employed to fill the demand for jobs in marketing. Even more significant is the fact that less than 5 percent among completers available for work were unemployed, a rate far under the national rate for the respective age groups.

Distributive education is noted for its extensive relationships with employers, largely due to the continuing priority given to cooperative vocational education. Of all the secondary and postsecondary students

TABLE 14: ENROLLMENTS IN DISTRIBUTIVE EDUCATION, BY LEVEL
(Program Years 1972 and 1978)

	1972		1978	
	Number	Percent	Number	Percent
Total	640,423	100.0	962,009	100.0
Secondary	262,730	41.0	397,429	41.3
Postsecondary	102,844	16.1	248,109	25.8
Adult	274,849	42.9	316,471	32.9

enrolled in preparatory programs in FY 1978, 29.9 percent were employed part-time in combination with in-school instruction. On a one enrollee-one employer basis, the program enlisted the participation of 193,046 employers. Estimates based on actual earnings reported in 28 States place earnings of these students at $370,679,000, with $25,803,000 State and Federal taxes deducted from their annual wages.

Dissemination of the various possible programs in distributive education, from results of research and curriculum projects sponsored by the U.S. Office of Education and initiatives within the profession, has moved distributive education from a "course" perception to a "program" orientation. The general marketing approach to instruction is giving way to more discrete or "specialized" programs. In Fairfax County, Va., for example, the secondary program includes fashion merchandising in nearly all of its 22 high schools and one hotel-motel operations program in addition to the general marketing curriculum. At the postsecondary level, more marketing options are available since students at that level tend to have clearer definitions of their objectives in marketing. Many secondary distributive education students elect to continue their training becasue of the availability of postsecondary specialized curriculums.

The largest training area for secondary students is general merchandise, which is essentially department store oriented. The next three highest enrollment areas are food services, food distribution, and apparel and accessories (fashion merchandising). Real estate attracts the largest enrollment at both the postsecondary and adult levels. Other significant enrollment areas in adult training include general merchandise, finance and credit, food services, and insurance. Postsecondary education has the next highest enrollments in general merchandise, finance and credit, and industrial marketing.

The student organization in distributive education is the Distributive Education Clubs of America (DECA). Like other student organizations in vocational education, it serves to enhance the personal and occupational competencies and is recognized as an integral part of the instruction. Nationally, the rate of participation in the High School Division of DECA for the 1978 school year was 41.4 percent, or 164,665. At the postsecondary level, the Junior Collegiate Division involved 7,242 students, which is 2.9 percent of the total postsecondary enrollment.

In view of the priority placed upon sex equity in the current legislation, it is important to note that distributive education has always enrolled a balance of male and females in the program. For FY 1978, 51.5 percent of the total enrollment was female. Undoubtedly this is a reflection of the overall employment picture in marketing where both male and female seek and obtain positions with equal ease.

Health Occupations include all organized instructional programs which prepare individuals for an occupation in the health field up to and including those programs at the associate degree level.

The Vocational Education Amendments of 1968 (P.L. 90-576) eliminated categorical funding by occupational areas and left the determination of occupational areas to be funded up to the States. Health occupations education was given high priority by State Boards of Vocational Education under this legislation, and programs and enrollments have continued to expand.

Since the mid-1960's, sharply rising enrollments and graduates have been reflected in increases in the number of practitioners in the major health professions categories and in the number and capacity of health occupations programs. These trends will continue in the decade ahead according to the best available projections.

A total of 758,808 students were enrolled in health occupations programs in 1978, an increase of more than 125 percent over the 336,652 enrolled in 1972. (See table 15.) Over 82 percent were enrolled in postsecondary or adult programs; less than 18 percent were at the secondary level. Enrollment in some health occupations programs grew more rapidly than in others. For example, between 1974 and 1978 when total health occupations enrollment increased over 50 percent, environmental health program enrollments increased by over 79 percent. Other rapid growth areas included occupational therapy (over 46 percent for this small field); mental health technician, about 80 percent; inhalation therapy technician, almost 118 percent; medical assistant, over 76 percent; and medical emergency technician which grew over 96 percent in the shorter period between 1975 and 1977. (See table 16.) Other new programs in the fast growing health area included the following: Dental technician, surgical technician, nuclear medical technology, other radiologic occupations, opthalmic, and mortuary science.

Vocational health occupations programs continue to attract many more female than male students. Between 1975 and 1977 female enrollment increased over 59 percent, while male enrollment declined by almost 57 percent. By 1978, males comprised only 20 percent of vocational health program enrollment compared with almost 41 percent in 1975. There were a few program areas, environmental health and medical emergency technician, where male enrollments showed increases, but these were the exception.

To meet the expected growth in demand for trained persons in health occupations, studies are being conducted to identify the categories and numbers of health manpower personnel needed within specific geographical areas. The results of these studies are expected to form a foundation for planning health occupations programs and establish a reliable base for estimating numbers to be prepared in each category.

Health Occupations Students of America (HOSA) is a national vocational organization for secondary and postsecondary health occupations students. Activities of HOSA are an integral part of the instructional program that provides occupational skills as well as leadership qualities. A combination of HOSA activities and classroom instruction makes education and training a more meaningful experience. HOSA was officially formed in November 1976, with a membership of six chartered States. By April 1978, eight additional States were chartered making a total of 14 States with 13,000 members. Since this time, four more States have been chartered with a potential membership of 18,000 for 1979. Other States are exploring the feasibility of establishing such organizations, and the American Vocational Association has given support to further development of the activity.

TABLE 15: ENROLLMENT IN VOCATIONAL EDUCATION HEALTH OCCUPATIONS

(Program Years 1972-78)

Program Year	Total	Male	Female	Secondary	Postsec.	Adult
1972	336,652	51,581	285,071	59,466	177,466	99,720
1973	421,075	-	-	75,596	192,612	152,867
1974	504,913	-	-	103,780	228,180	172,953
1975	616,038	252,360	364,274	103,315	263,229	250,094
1976	684,904	208,152	476,802	108,116	290,007	286,781
1977	740,520	141,451	579,053	116,414	302,011	322,095
1978	758,808	167,044	591,764	131,907	233,279	393,622

TABLE 16: ENROLLMENT IN VOCATIONAL EDUCATION HEALTH OCCUPATIONS, BY INSTRUCTIONAL PROGRAMS

(Program Years 1974-78)

OE Instructional program	1974	1975	1976	1977	1978
Dental assistant	20,560	20,335	21,248	23,758	21,724
Dental hygienists	6,513	7,371	6,427	7,387	7,465
Dental lab tech.	4,060	4,703	4,345	4,851	4,185
Other dental	-	419	254	1,617	1,251
Medical lab assistant	7,626	10,710	15,871	16,915	17,988
Other medical lab tech.	9,098	12,627	7,153	5,062	5,464
Nurse (Assoc. Degree)	90,310	102,540	104,939	111,907	115,940
Practical voc nurse	88,753	93,209	98,294	98,524	94,874
Nurses' assist (aide)	83,077	104,564	116,622	116,067	117,495
Surgical tech.	-	2,960	3,143	3,522	3,895
Other nursing	-	38,116	42,648	52,828	49,386
Occupat. therapy	1,728	2,029	2,658	2,892	2,531
Physical therapy	2,262	2,390	3,099	3,757	3,310
Other rehab.	-	1,354	1,548	1,266	2,819
Radiologic tech.	8,675	9,127	10,174	11,173	10,983
Nuclear med tech.	-	56	192	400	343
Other radiologic	-	233	5,438	366	317
Opthalmic	-	1,461	1,691	1,657	2,758
Environ health	2,254	2,497	2,513	5,192	4,049
Mental health tech.	8,223	10,748	15,736	13,736	14,837
Inhalation therapy tech.	6,410	9,141	8,748	10,595	14,008
Medical assist.	18,130	18,500	24,988	28,504	31,973
Health aide	12,075	17,676	15,234	15,830	15,699
Med emergency tech.	-	45,985	54,181	70,514	88,092
Mortuary science	-	543	719	1,788	1,513
Other health	135,290	97,422	117,041	130,412	125,909
TOTALS:	504,913	616,638	684,904	740,520	758,808

Occupational home economics education programs for paid employment were initiated with the passage of the Vocational Education Act of 1963 (P.L. 88-210) which stipulated that 10 percent of the Federal funds be used for training youths and adults in occupations which utilized vocational home economics knowledge and skills. This was further amended by part B of the Vocational Education Amendments of 1968, title I, P.L. 90-576, and more recently by subpart 2, section 120, of the Education Amendments of 1976.

Occupational home economics education programs are offered on the secondary, postsecondary, and adult levels (both preparatory and supplementary) to educate and train personnel in recognized and emerging occupations encompassing all aspects of home economics education, including but not limited to: (1) child care and guidance and management of children, including foster/family day care; child nutrition; working with parents; public, private, or parochial nursery, kindergartens and child care centers; centers for mentally retarded and/or physically handicapped, etc.; (2) clothing apparel and textiles management, production, and services including designers; custom and commercial garments and apparel construction, clothing assistant, manager, and workers in textile industries; (3) food management, production and services including food service employee/managers, food caterer/aide and dietetic aide/assistant; school food service worker/manager and other quantity/commercial food services; (4) home furnishings, equipment, management production and services including special emphasis given to assisting purchasers, interior designers or decorators and other home service assistants; (5) institutional, home management, and supporting services including emphasis on assisting consumers in institutional/executive management housekeeping; hotel/motel housekeeping, commercial cleaning, therapeutic recreational assistance and companion to the aged, and assisting homemakers (male and female) with management of household tasks thus enhancing their employability skills.

The Future Homemakers of America, the national vocational home economics education student organization which is an integral part of the instructional program, is designed to serve students, both in occupational home economics education and consumer and homemaking education, with two types of chapters -- FHA and HERO. HERO (home economics related occupations) chapters emphasize preparation for paid employment occupations and careers with the recognition that workers, males and females, younger and older adults, also fill multi-roles as workers, homemakers, and adult leaders. Membership in HERO chapters of the Future Homemakers of America in 1978 was approximately 50,000 of which one-third was male.

Occupational home economics offerings have steadily increased at all educational levels under the Vocational Education Act of 1963 and the subsequent amendments of 1968 and 1976. New paid-employment occupational opportunities utilizing knowledge and skills of home economics education have been emerging for personnel in all instructional areas. The same concepts and applications basic to preparation for the occupation of homemaking (consumer and homemaking education) are basic to the home economics education occupations, clarified as paid employment. For example, the same basic principles are taught in food and nutrition for the homemaker as for the food service worker; the same clothing principles can be used by the homemaker that are used in the apparel industry; the same human development, care, and guidance principles apply in child care and guidance services and the care services of the elderly and handicapped as in caring for one's own family. The major difference lies in the setting, the instructional objectives, the level of competency and responsibility required, and the scope of operation. This overlap remains a strength and a link between preparation programs for paid employment-home economics education occupations and for the occupation of homemaking.

Total enrollment in occupational home economics education programs for 1978 reached 459,590 persons of which 180,525 were males. (See tables 17 and 18.) All instructional areas of occupational home economics education programs grew from 1972 to 1978 (See table 17), which may reflect the increasing demand of employers for quality trained personnel versus non-trained workers, particularly in areas where trained personnel are concerned with services toward the care of the people. Furthermore, the continual growth of these programs in most of the States demonstrates the additional emphasis given to preparing teachers to specifically teach in paid-employment home economics programs by working closely with business, industry, and agencies which employ graduates of the programs. This linkage is also demonstrated in revised and/or new curriculum and instructional materials, in providing realistic work experiences, in better assessing the potential job market and in placement of graduates. In 1978, 111,729 or 20 percent of those enrolled in occupational home economics education programs (paid employment) completed their programs. The completion rate may be somewhat distorted since many of the trainees are in 2-year training programs. Also, because a high percentage of the trainees are homemakers, they may not enter the labor market immediately because of family responsibilities, although followup studies indicate that approximately 60 percent of the enrollees do enter the field for which they are prepared. Some become sufficiently interested in the instructional area to continue their education toward becoming a professional in a particular field; e.g., care and guidance of children or institutional food service area.

Various types of occupational home economics programs are offered.

Care and guidance of children instructional programs are offered in all States, with an enrollment of 77,158 youth and adults in 1972 and 163,478 in 1978. Programs range in scope and emphasis depending on the potential labor market demands, with employment opportunities available to trained personnel in public, private, or parochial child care programs, foster care centers, institutional and family day care centers, recreational centers, centers for mentally retarded or physically handicapped, hospitals and pre-school nurseries and kindergarten programs. Programs on the postsecondary level have increased over 14.7 percent between 1972 and 1978. The development of "Competency Based Teaching Modules for Child Care and Development Occupations" curriculum has given impetus to programs in this area.

Clothing management, production, and services instructional programs grew in 57 States and territories with an enrollment of 59,524 in 1972 to an enrollment in 1978 of 133,807 youth and adults. Preparation for paid employment in occupations deals with most aspects of clothing, apparel and textiles management, production and services. Washington State Shoreline High School, for example, has "The Factory" which includes sewing for profit programs preparing male and female students for the garment industry with a built-in job experience component where students spend the summer making garments for one of the leading cross-country skiing garment companies in the country. In Louisiana and Puerto Rico the women's

TABLE 17: OCCUPATIONAL HOME ECONOMICS ENROLLMENTS, BY INSTRUCTIONAL AREAS

(Program Years 1972, 1976-78)

Instructional areas	Enrollments			
	1972	1976	1977	1978
TOTALS:	279,966	471,289	510,816	459,590
Care and guidance of children	77,158	144,208	159,445	153,478
Clothing management, production, and services	59,524	105,766	104,688	70,807
Food management, production, and services	77,594	137,284	155,406	151,134
Home furnishings, equipment, and services	21,278	33,198	35,308	29,222
Institutional and home management services	8,061	12,082	16,043	17,751
Other	36,048	38,751	39,926	37,198*

*Decrease due to counting in designated programs.

TABLE 18: OCCUPATIONAL HOME ECONOMICS ENROLLMENTS, BY SEX, TARGET POPULATIONS, AND LEVEL

(Program Years 1972, 1976-78)

	Enrollment			
	1972	1976	1977	1978
TOTAL	279,966	471,289	510,816	459,590
Female	240,948	349,932	428,530	378,965
Male	39,018	121,357	82,286	80,625
Levels				
Below grade 9	8,611	NA	NA	NA
Secondary	161,623	240,399	265,321	252,566
Postsecondary	37,881	61,966	73,575	74,228
Adult - Total	80,462	168,824	171,920	132,796
Preparatory	22,680	42,808	44,873	-
Supplementary	57,611	126,097	127,024	-
Apprenticeship	182	19	23	-
Coop education	16,835	39,363	41,546	39,751

correctional institutions prepare inmates for employment as custom tailors, alterationists, custom apparel/garment seamstresses. Of the students completing these programs, the recidivism rate has been very low. For example, out of 18 graduates in one program, 17 have been successfully employed for the past 2 years since they were released. In Ohio, Utah, and Colorado, comprehensive laundering, dry cleaning, and alterations programs are provided in some schools including laboratories with equipment and operations comparable to dry cleaning establishments in the community. In Ohio, fabric services programs are offered to the orthopedically handicapped and deaf students. Specialized equipment and supplies are also offered to serve those students who are referred by the special education division.

Food management and production services instructional programs are offered in all States, Puerto Rico, and the Trust Territories, with an enrollment in 1978 of 181,134 compared to 77,594 in 1972. For example, in California, Tennessee, Oklahoma, and Maine postsecondary programs for food service managers and supervisors are conducted in cooperation with the State Dietetic Association. Most of the States are working in cooperation with the National Restaurant Association to develop curriculum, provide teacher inservice programs which provide assistance to teachers in preparing youth and adults for the commercial food service industry both in regular food establishments and fast food establishments. In Minnesota, an area vocational-technical center located on an Indian reservation offers training in food service and hotel management. New curriculum materials developed under contract with the U.S. Office of Education have also increased the potential offerings in these programs.

Home furnishings, equipment, management, and services instructional programs have increased from 21,278 enrollees in 1972 to 41,222 in 1978. This area has been one of the slowest in developing; however, currently 47 States and Puerto Rico are offering successful programs. Employment opportunities range from jobs in department stores, home furnishings and interior decorating, and design shops to mobile home manufacturers and self owned businesses.

Institutional, home management, and supporting services occupations is an area with many emerging occupational opportunities. Enrollment in 1972 was 8,026, but in 1978 it had increased to 17,751. Some of the emerging occupations are in areas for serving the aged, convalescent persons and the increased number of homemakers working outside the home. For example, the State of Ohio is preparing therapeutic recreational assistants through organized classroom instruction, supervised laboratory and work experiences. Currently there are 35 secondary students enrolled; since the implementation of the program 3 years ago, the retention rate and placement rate have been extremely good.

In Iowa, homemaker aide/assistants are being prepared through the occupational home economics education programs and placed in a variety of jobs by county welfare departments. In South Dakota, Indian students are trained as home management assistants. In Kentucky, at Cardinal Hill Hospital, occupational home economics programs are offered to both in-patients and out-patients all of whom are physically handicapped. The goals of the program are to facilitate the individual's return to the community as a contributing member of society. Most of the clients are enrolled in one or more occupational home economics education programs as well as consumer and homemaking education programs.

Federally funded curriculum materials have been designed and developed in modular form and competency based to promote the development of additional occupational home economics education programs for paid employment. These materials were disseminated to State and local vocational home economics educators. In addition to federally funded curriculum, all States have developed curriculum with the cooperation of teacher educators and business and industry. For example, a new curriculum entitled "Stamp out Sexism: A Texas Awareness Project," was produced by Texas for inservice teacher workshops. In an effort to provide leadership services and professional development of State and local home economics educational personnel, regional and national vocational home economics education workshops have been planned, developed and conducted by the Headquarters Vocational Home Economics Education staff and Regional AVTE staff, U.S. Office of Education, BOAE/DVTE.

Office Education -- This program area was included in Federal Legislation as a vocational program for the first time in the Vocational Education Act of 1963. However, business and office education program offerings have been available to students for a much longer period. Some estimates are that prior to 1963, about 18 percent of the students in the public high schools were taking three or more business education courses with a vocational intent.

Business and office education is organized into programs of instruction to provide students with skills to enter and to advance in careers in business. In the instructional process, program content is drawn from other subject matter areas and job analyses. Learning experiences related to the facilitation function of the office include: (1) ownership and management responsibilities; (2) coordinating office activities; (3) recording, processing, and retrieving data; (4) supervising; (5) internal and external communication; and (6) reporting of information. Opportunities are provided for students both during and outside regular classtime to develop interest, skills, and knowledge in selected aspects of business and office occupations as an integral part of the instructional program. The business and office student organizations provide additional opportunities to develop leadership qualities and an understanding of the world of work in business and office occupations. Such organized student activities, under appropriate supervision, are designed as an integral part of instruction.

Enrollment growth in business and office occupations, which comprise more than 20 percent of all vocational enrollments, increased more than 41 percent between 1972 and 1978 but with considerable variation among the occupational sub-groups. Personnel training and related occupations, one of the smaller sub-groups, more than tripled. Filing, office machines, a large group, increased 85 percent; information, communications occupations grew almost 91 percent over this period. On the other hand, typing and related decreased by 7 percent, and stenographer, secretary, and related grew by 27 percent or less than the total office group. Accounting and computing increased 67 percent, and business data processing 39 percent. Materials support occupations (transporting, storing, and recording) showed a decrease of almost 59 percent over the period. (See table 19.)

TABLE 19: ENROLLMENT IN OFFICE OCCUPATIONS (Program Years 1972-78)							
Office occupations	1972	1973	1974	1975	1976	1977	1978
TOTAL:	2,351,878	2,499,095	2,757,464	2,951,065	3,114,692	3,273,049	3,312,475
Accounting and computing	351,861	385,622	429,708	473,184	511,998	565,614	588,971
Business data processing system	156,748	155,804	160,020	182,418	194,532	209,928	218,160
Filing, office machines	398,226	429,644	508,915	539,562	592,608	732,432	719,267
Information, communication	23,826	29,640	31,636	40,705	41,673	43,412	45,400
Materials support occupations	10,288	8,636	17,219	9,699	6,843	5,876	4,198
Personnel, training, etc.	13,693	20,631	27,492	50,099	46,216	50,611	58,717
Stenographer, secretary, etc.	550,686	606,065	656,522	667,239	699,844	729,599	700,586
Supervisory & administrative	77,730	84,368	109,864	129,971	147,658	154,447	212,792
Typing and related	628,414	628,758	661,730	667,250	656,043	561,888	584,247
Other	141,300	149,927	159,685	190,961	217,277	219,242	180,137

Enrollment of males in office occupations is now 24 percent, with more males than females enrolled in some subgroups. (See table 20.) Male enrollment increased from 1972 to 1978 by 45 percent. This increas in male enrollment has been attributed to: (1) Federal legislation encouraging equal distribution of males and females; (2) the favorable employment picture (The unemployment rate under this occupational area is only 5.4 percent, versus the much higher national unemployment rate -- and there is a shortage of skilled office personnel); (3) the extensive specialization in the secretarial field with opportunity for higher salaries; i.e., the executive secretary, the legal secretary, medical secretary, the administrative secretary, and court and conference reporting; and (4) greater use of computers, word processors, and other complex equipment.

Technical Education -- This program area, supported by Federal funds, was first authorized under title VIII of the National Defense Education Act of 1958 to "prepare technicians" necessary for national defense. The Vocational Education Act of 1963 went further authorizing the preparation of technicians, specialists and highly skilled workers and related adult programs. It designated a minimum of 15 percent of the grants to States be set aside for postsecondary programs. Subsequent amendments, including the Education Amendments of 1976, continued the 15 percent minimum of Federal funds set aside for postsecondary and adult education.

Preparatory programs for technicians and specialists are offered in area vocational and technical schools which provide programs beyond the twelfth grade, community and junior colleges, technical colleges, area vocational and technical institutes, and in the lower division of some 4-year colleges and universities. Many of the programs lead to an associate degree, others to certificates of accomplishment. Specialized short courses or part-time preparatory programs are provided in day or evening programs in these institutions or wherever the educational service may be best provided for employed or unemployed adults seeking to update or upgrade job skills or learn new ones.

Enrollments in technical education programs reached 519,573 in 1977, almost double the 337,069 students enrolled in 1972. This growth is expected to continue as technological advancements make the Nation's work force needs ever more complex. With fewer youth entering the labor force in the 1980's, more and more adults will need special technical upgrading and updating education to meet work force needs.

Technical education accounted for more than 19 percent of the postsecondary and adult enrollment in vocational education in FY 1978. This did not include several thousand persons in high schools preparing for entry into the rigorous 2-year postsecondary preparatory programs to become technicians or comparable specialists. (See table 10.)

Among the 10 occupational offerings grouped under technical education, electrical, electronic and instrumentation, and police science were the largest, comprising almost 42 percent of the total. (See table 21.)

TABLE 20: ENROLLMENT IN OFFICE OCCUPATIONS, BY SEX (Program Year 1978)

Occupational area	Total number enrolled	Number of females	Percent of females	Number of males	Percent of males
Filing, office machines	719,267	593,614	83%	125,653	17%
Stenographer, secretary, etc.	700,586	653,369	93%	47,217	7%
Accounting and computing	588,971	389,448	66%	199,523	34%
Typing and related	534,247	467,554	80%	116,693	20%
Business data processing system	218,160	124,856	57%	93,304	43%
Supervisory and administrative	212,792	92,116	43%	120,676	57%
Other, miscellaneous office	180,137	121,659	67%	58,478	33%
Personnel, training & related	58,717	34,330	58%	24,387	42%
Information, communication occupations	45,400	27,390	60%	18,010	40%
Materials support transp.	4,198	2,032	48%	2,166	52%
TOTALS:	3,312,475	2,506,368	76%	806,107	24%

TABLE 21: TEN TECHNICAL PROGRAMS WITH HIGHEST ENROLLMENTS (FY 1978)		
Program	Enrollment	Percentage of Total
Total - All Programs	527,681	100.0
1. Police science	105,457	20.0
2. Electronic	90,306	17.1
3. Architectural	30,660	5.8
4. Mechanical & electromech.	30,168	5.7
5. Civil	30,100	5.7
6. Fire and safety	29,147	5.5
7. Electric	25,032	4.7
8. Industrial	18,056	5.4
9. Scientific data process.	15,887	3.0
10. Automotive	14,041	2.7
Other	138,827	26.4

NOTE: These data include students in high school programs which prepare them to enter postsecondary programs in addition to the postsecondary and adult enrollments.

Through continued support of the Office of Education's Division of Vocational Research and Development, two new curriculums were made available. These, based on 4 years of effort were "Legal Assistant Program - A Suggested Two Year Post High School Curriculum" developed under contract with the American Association of Community and Junior Colleges, and "Nuclear Operator Trainee - A Suggested Two Year Post High School Curriculum" developed under contract with the Technical Education Research Center Southwest, Waco, Tex. Use of these curriculums is expected to help initiate successful programs and to enhance and improve the quality of existing programs.

Two additional initiatives were launched in 1978: one was to prepare teaching/learning materials for energy production, use, and conservation technicians; the second, to complete preparation of curriculum guides for nuclear radiation and health protection technicians, nuclear materials handling technicians, and nuclear power plant instrumentation technicians.

Trade and Industrial Education -- This program area includes over 50 instructional programs offered at secondary, postsecondary. and adult levels. Often synonymous in the public's mind with vocational education, T & I with 3.4 million enrollees in 1978 is the largest vocational program division. (See table 22.)

Included in trade and industrial education are instructional programs such as auto mechanics (340,686 enrollees in 1978), welding and cutting (205,486), firefighting (186,472), carpentry (162,313), and electronics occupations (146,294). Enrollees in these programs are almost entirely male. Other programs with greater female representation include cosmetology (97,947), graphic arts (29,218), commercial photography (40,185), and commercial art occupations (52,966). For enrollment data on all instructional programs, by sex and level, see Appendix B, Summary Tables.

Trade and industrial instructional programs which prepare persons for initial employment or provide instruction for upgrading or retraining are concerned with layout, designing, producing, processing, assembling, testing, maintaining, servicing, or repairing any product or commodity. Instruction is provided in: (1) basic manipulative skills, safety judgement, mathematics, science and communications skills required to perform successfully in the occupation; (2) through a combination of shop or laboratory experiences similating those found on the job; and (3) through cooperative education which provides work experiences to reinforce classroom, shop, or laboratory instruction. Also included is related instruction for apprentices and upgrading programs to develop additional skills for those who have completed their apprenticeship.

An integral part of instruction in trade and industrial education, the Vocational Industrial Clubs of America (VICA) provide for organized student involvement with leading civic organizations and business and industrial firms. In addition to emphasis on the knowledges and skills required for specific trade and industrial occupations the VICA program organizes activities affording opportunities for students to develop and strengthen leadership abilities, develop wholesome attitudes about citizenship and moral standards, and improve their attitudes toward work. VICA membership was over a quarter of a million in 1978 or approximately 12 percent of the students participating in trade and industrial education.

TABLE 22: ENROLLMENT IN TRADE AND INDUSTRIAL EDUCATION
(Program Years 1972 and 1978)

Enrollment	1972	1978	Percentage increase
Total	2,397,968	3,402,722	42%
Secondary	952,283	1,469,828	54%
Postsecondary	356,879	423,506	19%
Adult	1,088,806	1,509,388	39%
Cooperative ed.	93,068	136,930	47%

TABLE 23: WORK STUDY ENROLLMENTS AND FEDERAL EXPENDITURES
(Program Years 1972-78)

Program year	Enrollment	Federal expenditures
1972	30,896	$6,170,774
1973	33,681	6,055,184
1974	43,684	3,439,886
1975	47,980	9,041,679
1976	53,355	8,978,633
1977	54,051	9,789,550
1978	38,611	6,774,321

Enrollment in trade and industrial education increased 42 percent from 1972 to 1978. The number of T & I teachers increased somewhat less or about 35 percent during this period. The largest enrollment increase was in secondary T & I programs, which grew 54 percent, growth in postsecondary T & I enrollment was less than 19 percent for the same period. Numbers of students completing T & I programs rose dramatically from 440,215 in 1972 to 856,388 in 1978, or almost 95 percent.

Work-Study Programs -- The Educational Amendments of 1976 authorize the States to use funds for work-study programs under Sec. 120, the basic grant. The State is required to adopt policies and procedures to insure that Federal funds will be expended solely for the payment of compensation of work-study students. Moreover, priority funding must be given to applications submitted by local educational agencies that serve communities having substantial numbers of youths who have dropped out of school or who are unemployed.

Work-study programs are to provide paid employment to assist full-time vocational education students, ages 15 but less than 21, who need earnings from such employment to begin or continue their vocational education program. Students employed under such a program can work no more than 20 hours a week when classes are in session. Under the 1976 Amendments, work-study students cannot be compensated at a rate which exceeds the hourly rate prevailing in the area for persons performing similar duties. Employment must be with the local educational agency or some other public or non-profit agency or institution. Wherever possible, work-study employment should be related to the student's vocational studies.

Work-study speaks to the national problem of jobless youth in vocational programs. Employment gives this targeted group an initial job experience which will provide some income and achievement of fundamental work habits and attitudes. In many cases, the work-study program offers disadvantaged vocational youths an opportunity to develop a sound concept of work and provides them an understanding of the reason for work. It also encourages needy vocational students to remain in school and achieve marketable employment skills.

Reports from States indicate the Education Amendments of 1976 have adversely affected work-study programs. By placing work-study funding under the basic grant rather than providing separate funding for the program, work-study is now one of 16 optional programs each State may select to fund. State funding priorities have not supported the work-study program to the degree provided under prior legislation. Under prior legislation, the Vocational Education Act of 1963, as amended in 1968, formula grants were specifically allocated for work-study programs. This change, making participation optional, resulted in a reduction in participants from 54,051 in 1977 to 38,611 in FY 1978 (See table 23.)

In some instances where fiscal circumstances are forcing work-study programs to be phased out, Comprehensive Employment and Training Act (CETA) funds may be rendering services for the economically disadvantaged vocational education student. Two major components of CETA which affect work-study are:

1. Title II, section 204, Vocational Education Supplemental monies, which can be used to provide vocational instruction

and related services to eligible economically disadvantaged and unemployed, underemployed, or in-school students.

2. Title IV, part C, subpart 3 Youth Employment and Training Programs (YETP). Depending on the nature of the YTEP program in any given local education agency, work-study programs may be phased out and the economically disadvantaged student placed in a program which includes either provision of transition services (including job sampling which may or may not be in the form of vocational exploration) and/or career employment experience.

In the case of career employment service, the YETP regulations state that all career employment experiences should have the goal of increasing student's ability to make career decisions. Jobs provided under such programs must be certified by the educational agency as being relevant to the educational, career goals, and program of the particular youth. The major focus of such a program appears to be a career exploration experience aimed at increasing decision-making skills to supplement a general educational instructional program. Vocational work-study programs, on the other hand, are designed to assist full-time vocational students who need earnings to remain in school to learn a specific vocational skill.

Cooperative Vocational Education

The Education Amendments of 1976 provide optional funding for this activity under the basic grant to each State. Previously the Vocational Education Act of 1963, as amended in 1968, provided formula grants for this program. At present States may use funds under the basic grant to establish or expand cooperative vocational education programs. The programs are designed to prepare students for employment in a specific occupation or a cluster of closely related occupations. Cooperative vocational education programs are interdependent combinations of occupational instruction and a work environment related to that instruction. These programs are identified by the following criteria: they are programs of vocational education; they have a written cooperative arrangement between the school and employers; they provide related classroom instruction (including academic instruction related to the job): they have planned and school supervised periods of work alternated with study in school; and these students are employed and compensated to conform to Federal, State, and local laws.

Priority for Federal funding of these programs under the 1976 Amendments is given to areas with high rates of school dropouts or youth unemployment. States must also assure that students in non-profit private schools may participate in cooperative vocational education programs; programs having non-profit private school students may be supported up to 100 percent with Federal funds. States may choose to exercise the provision to reimburse employers, where necessary, for added training costs.

Program activities provide instruction at the secondary, postsecondary, and adult levels and cut across all occupational areas. The work environment aids in achieving educational goals. Key instructional elements are the development of competencies needed for employability, evaluation of the effectiveness of these programs, and establishing bridges between school and employment for all students including special groups such as handicapped, women, minorities, disadvantaged, and incarcerated.

Typically, a cooperative vocational education program allocates 3 to 4 hours daily in a work environment outside the school. Occupations are diverse and vary from one geographical area to another. Individual programs are necessarily tailored by the teacher-coordinator to fit each student and local job market. Employers pay cooperative students at either the minimum wage or at a student-learner rate established by the Department of Labor.

During the 1978 school year, 29 States reported the estimated earned wages of cooperative vocational education students, based on the minimum wage of $2.65 an hour, was $689,423,364. The estimated total earned wages of cooperative vocational education students in the 57 States and territories was over $1.3 billion. State and Federal income and FICA taxes are deducted from their earnings. The total taxes paid by these students is estimated at more than $100 million.

Enrollments in cooperative vocational programs were relatively stable (about 5 percent to 6 percent of total) between 1972 and 1977 (See table 24.) Cooperative students enrolled in distributive education, office education, and trades and industrial education account for the largest group by far, nearly 80 percent of the total in 1978.

COOPERATIVE EDUCATION ENROLLMENTS AS A PERCENT OF OCCUPATIONAL PROGRAMS

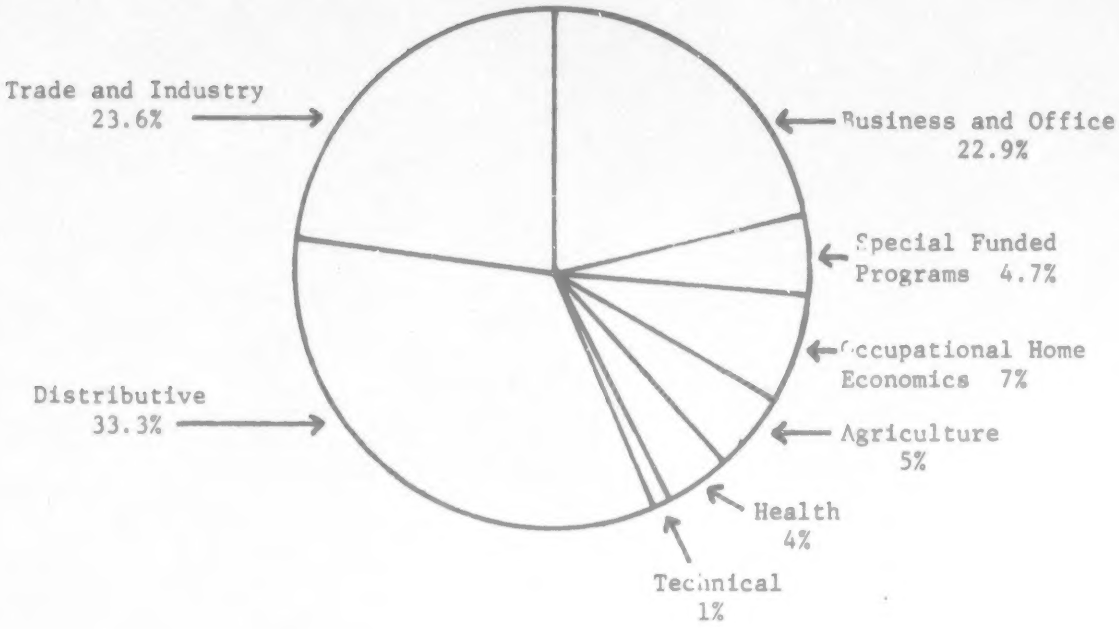


TABLE 24: COOPERATIVE EDUCATION ENROLLMENTS AND FEDERAL EXPENDITURES
(For Program Years 1972-78)

Program Year	Enrollment	Federal Expenditures
1972	459,614	19,948,690
1973	508,409	21,709,942
1974	605,140	18,065,667
1975	581,071	19,437,647
1976	611,480	18,336,331
1977	628,150	18,970,263
1978	580,316	11,194,865

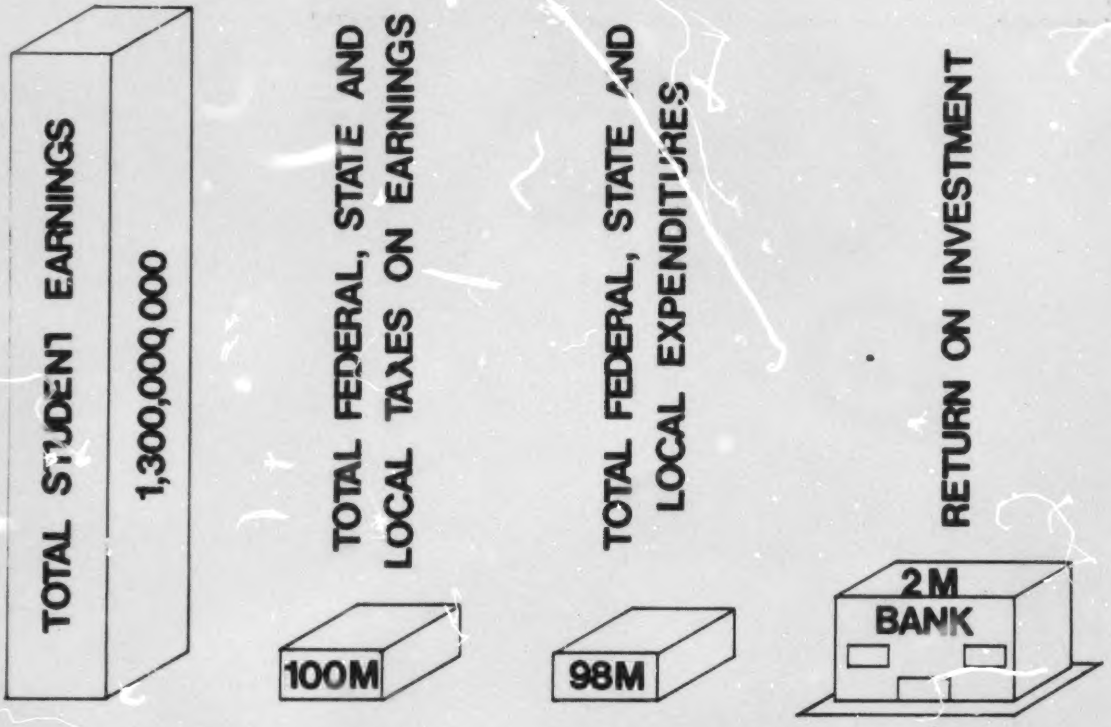
VOCATIONAL COOPERATIVE EDUCATION RETURN ON INVESTMENT

MIDDLE NATIONAL BANK **FISCAL YEAR 1978**

PAY TO THE ORDER OF: Federal, State & Local Governments **$**100,000,000

One hundred million and no/100 ———— **DOLLARS**

FOR: Taxes Vocational Co-op Students of America



Evaluations available suggest that cooperative vocational education works very well in motivating students. For these students, benefits in addition to earnings are very important. These include: an opportunity for testing career goals in a meaningful way before a final decision is made; facilitating a path to the unfamiliar world of work; fulfilling personal needs and aspirations; development of attitudes and skills essential to satisfactory working relationships; and current employment record. For the employing community, participants in cooperative education programs are attractive because they provide employers with a source of motivated employees who can be trained with minimum expenses and can be observed prior to full-time employment.

For many communities, cooperative vocational education is a practical way to keep some qualified young people in the community. The need to purchase expensive, specialized equipment and laboratory facilities in the schools can be reduced since students receive some of their training using the employer's equipment. Schools can often teach more students in a given facility by carefully scheduling work and school periods. Moreover, immediate application of learning in realistic settings contributes to the instructional process.

Energy Education

The Vocational Education Amendments of 1976 (sec. 123) put emphasis on energy education in vocational and technical programs responding to the urgent need for the Nation to become more self-sufficient in production, use, and conservation of energy. States were given the option under the basic grant to provide funds for programs in coal mining and related careers, and for solar and related energy production activities. Other sections of the 1976 Amendments (sec. #106) authorized use of funds for new and emerging occupations. Under these provisions, allowed prior to the 1976 Amendments, efforts had already begun to organize programs relating to nuclear power production, petroleum exploration and production, and coal mining.

Information on existing programs relating to energy education to the States was accelerated in FY 1978. The urgency for establishing energy education programs in vocational education was conveyed and technical assistance for vocational educators and related Federal, State, and public leaders facilitated.

In 1977 and 1978, an individual in each State Vocational Education Department was identified as the leading person in the State in energy education initiatives.

By 1977, a report made to the States on a 1976 energy conference held in Atlanta, Ga., sponsored by the U.S. Energy Research and Development Administration in cooperation with the American Association of Community and Junior Colleges, (AACJC), showed expanded activity in energy education. This report included name, address, and administrator of each school with on-going programs, and similar data on schools that were actively planning programs as follows:

a. Coal mining programs for technicians and skilled workmen-
   25 existing, 15 planned.

b. Petroleum production and processing technology-15 existing, 10 planned.
c. Nuclear energy production program-19 existing, 22 planned.
d. Solar energy-39 planned.

Specific communications to the States from the U.S. Office of Education and the Department of Energy have provided updated information on current sources of information, particularly on solar energy for space and/or water heating in buildings as an aid to State program development.

State personnel were also informed of important data and sources of information resulting from "Workshop on Solar Installer Training and Certification" (a national program), sponsored by the U.S. Department of Energy, Solar Transfer Program and the Heating, Air Conditioning and Plumbing Industry, held at Philadelphia, Pa., March 13-14, 1978.

Additional information and technical assistance were provided to the States revising and expanding consumer and homemaking education curricula stressing conservation of all types of energy utilized by homes and families. Cooperative efforts with other governmental agencies, business, and industry have sought to inform State agencies on ways of assisting consumers in coping with the scarcity of energy resources.

An Energy and Education Action Center was established in the U.S. Office of Education to coordinate and strengthen linkages with other Federal agencies to more effectively serve the education community. Staff of the Bureau of Occupational and Adult Education have worked closely with this Center. The Bureau also funded six major research projects relating to energy production, use, or conservation. Starting in 1974 a survey identified nuclear energy production field requirements for technicians and similar skilled workers. In 1976, teaching/learning materials for the nuclear technician were developed, and in 1978 a contract was awarded to complete teacher/learner materials for three other nuclear technician objectives, to prepare materials to teach energy production, use and conservation technicians. Three of these research projects are still in process.

Programs directed toward preparing skilled workers and technicians for coal mining, nuclear power production, petroleum production and processing were initiated or strengthened since 1973. Inquiries and reports from the States show a heightened awareness as to the urgency of program initiatives to develop energy education programs on production and conservation. They further indicate the need for greater emphasis in educating consumers in prudent use of energy resources.

Construction of Area Vocational School Facilities

Construction of Area Vocational School Facilities is authorized by the 1976 Amendments as part of the basic grant allocated to each State. Since Federal funds were first authorized for construction of Area Vocational School Facilities in the Vocational Education Act of 1963, the number of designated area vocational schools has increased from 405 in 1965 to 2,452 in 1975. The number of construction projects per year ranged from a low of 214 in 1965 to 400 in 1971. In the 6-year period from 1972-78, a total of over $1.6 billion was committed for area vocational school construction of which approximately 23 percent was Federal funds. The trend over the past several years has been for construction of fewer new area vocational schools with the majority of construction funds used for expansion, refurnishing, or remodeling existing schools. (See table 25.)

Provision of Stipends

The Educational Amendments of 1976 provided States with an option to use funds under the basic grant for stipends. The stipends would go to vocational students entering or enrolled in vocational education programs if the student had an acute economic need which cannot be met under the work-study program. Payment of stipends are restricted unless the State board first makes a specific finding in each instance that the funding of the particular activity is necessary due to inadequate funding in other programs providing similar support; or other services in the area are inadequate to meet the needs. An eligible recipient desiring to provide stipends for eligible students shall include a request for funds in the application submitted to the State boards and provide in the application an assurance that each applicant to be approved meets the requirements of the provision.

The rate of pay for the stipends may not exceed:

a. The minimum wage prescribed by the State or local laws multiplied by the number of hours per week the student is enrolled in a vocational education program.
b. The minimum hourly wage, set out under the Fair Labor Standards Act of 1938 as amended, multiplied by the number of hours per week the student is enrolled in the vocational education program.

This is a new provision for State agencies who must administer vocational education. During 1977, many States expressed uncertainty concerning the use of this provision. Analysis of available data shows that States have made limited use of the stipend provision. A possible explanation for this unused provision may be found through analysis of allocations of the Comprehensive Employment and Training Act (CETA) funds for allowance purposes. CETA funds under section 204 of title II, formerly section 112, title I, CETA, are available to provide vocational education and services to participants in programs under this title in accordance with an agreement between the State Vocational Education Board and the prime sponsor. In fiscal year 1978, 7.4 percent of available funds under this section were used for training allowances to eligible recipients. At least 20 States used section 204 monies for providing allowance. Total funds obligated for section 204 (including some carry over) for 1978 were $100,513,836. Total monies spent for provision of allowances under this section alone were approximately $7,035,969.

It appears that the States are using CETA money for the provision of allowances to enable vocational students to continue their training, while available monies under the basic grant of the Vocational Education Act of 1976 are being used for provisions of other allowed services.

TABLE 25: EXPENDITURES FOR CONSTRUCTION OF AREA VOCATIONAL SCHOOLS*

(Years 1972-78)

Fiscal Year	Total (in millions)	Federal	State/Local
1972	$ 265.2	$ 90.2	$ 175.0
1973	228.2	68.6	159.6
1974	232.5	53.6	178.9
1975	290.1	60.4	229.7
1976	282.0	45.8	236.2
1977	175.9	38.3	137.6
1978	175.0	29.2	145.8
TOTALS:	1,648.9	386.1	1,262.8

* Includes only schools with five or more program offerings which have been designated by State Boards of Vocational Education as area vocational schools.

Industrial Arts

Federal grants may be used by the States to implement and maintain industrial arts as prevocational or exploratory programs which are designed to assist in meeting the purposes of vocational education as defined in the act. Congress first recognized industrial arts as supportive of vocational education through the Education Amendments of 1972 (Public Law 92-318). Industrial arts pertains to that body of related subject matter, or related courses, organized for the development of understanding about all aspects of industry and technology, including learning experiences involving activities such as experimenting, designing, constructing, evaluating, and using tools, machines, materials, and processes which assist individuals in the making of informed and meaningful occupational choices or which prepare them for entry into advanced trade and industrial or technical education programs.

At the close of of 1978, State Boards of Vocational Education for 33 States and territories reported serving 1,311,906 secondary, postsecondary, and adult students in prevocational or exploratory programs. Industrial arts, incorporated into American schools almost 100 years ago, was considered general education and, as such, was ineligible as a vocational program prior to the amendment of the Vocational Act in 1972. Since no data are received from industrial arts programs not funded with vocational funds, enrollment data on the total number of students experiencing industrial arts training are lacking. However, some estimates suggest that industrial arts enrollment in grades 9 through 12 may exceed 6 million or nearly one half the total enrolled in public schools for those grades.

During 1978 the Office of Education awarded a contract to Virginia Polytechnic Institute to establish a data base from which qualitative standards can be developed for improving industrial arts education programs and for assuring that an industrial arts student organization is an integral part of the educational process. The products to be developed will include: guides for use by teacher educators, administrators, and teachers in implementing program standards. Products from this 3-year study will be available in 1982.

The policy of the U.S. Office of Education for vocational education student organizations was revised in 1978 to include recognition of the American Industrial Arts Student Association (AIASA) an an integral part of vocational education. Technical and supportive services were provided to assist this organization and State agencies in their efforts to improve the quality and relevance of instruction, develop student leadership, enhance citizenship responsibilities over come sex and race discrimination, and serve students.

Support Services for Women

Under the 1976 Amendments (Sec. 120), States are authorized to provide support services for women who enter vocational programs designed to prepare individuals for employment in jobs which have been traditionally limited to men, including counseling as to the nature of such programs and the difficulties which may be encountered by women in such programs, job development and job followup services.

From a general overview of the 1978 annual reports on vocational education and from verbal discussions with the States, efforts have been made to start implementing this item in a few States.

Federal funds from the basic grant to States and Territories may be utilized for day care services for children of students in secondary and postsecondary vocational education programs (including full or part time adults in these programs). Provisions for these services must be included in the approved Five Year and Annual State Program Plan for vocational education.

Day Care Services

In 1978 day care services for children of students in secondary and postsecondary vocational education programs were largely in the planning stage, focusing on identification of potential sites of existing pre-school facilities within vocational occupational home economics education and consumer and homemaking education programs. Day care training facilities are a part of the total child care training programs (paid and unpaid employment) under the vocational home economics programs. The scope of the programs vary according to locality and availability of funding. Five States established this program in 1978. In offering day care services for children of students in secondary and postsecondary vocational education programs, the States and Territories are encouraged to utilize, where feasible, in-school centers and laboratories which are already serving as educational programs for approximately 400,000 preschoolers through vocational home economics education child care and guidance programs (consumer and homemaking education and occupational home economics education programs). These programs are now operating in all States. By utilizing the existing vocational home economics education pre-school centers and laboratories which meet the standards for child day care services, duplication of efforts will be eliminated, better utilization of Federal funds afforded, and service will be more accessible to the children of vocational education and secondary and postsecondary students.

Vocational Education for Displaced Homemakers

Federal funds are authorized and mandated under subpart 2, sec. 107 (a)(4)(B) for use by each State and Territory under the 1976 Amendments for vocational education programs to assist: (1) persons who had solely been homemakers but who now, because of dissolution of marriage, must seek employment; (2) persons who are single heads of household and who lack adequate job skills; (3) persons who are currently homemakers and part-time workers but who wish to secure a full-time job; (4) women who are now in jobs which have been traditionally considered jobs for females and who wish to seek employment in job areas which have not been traditionally considered job areas for females; and (5) men who are now is jobs which have been traditionally considered jobs for males and who wish to seek employment in job areas which have not been traditionally considered job areas for males. The intent of this section is bolstered by other parts of the amendments, particularly sec. 107 which requires State plans to set forth a program to assess and meet the needs of such persons to provide for special courses for them in learning how to seek employment, and placement services for those who complete vocational education program and courses.

States have also recognized the need to aid displaced homemakers. State legislation for this purpose has been passed in 21 States, and bills are pending in three. Most State funded programs have taken the "center" approach. The center staff consists of women who were themselves once displaced homemakers. Thus each staff member serves as a model as well as a peer counselor. Self assessment, building self esteem, and life planning are integral parts of most programs. Workshops providing information on money management, skills assessment, divorce counseling, assertiveness training, and job hunting are offered in many centers. The federally funded displaced-homemaker activities are mostly in the form of programs and/or projects less than a year in length.

In 1978 displaced-homemaker programs were largely in the organizing phase -- identifying the number of persons in the displaced homemaker category and assessing their needs. The following examples illustrate actions taken across the Nation, although most programs are less than a year old. California supported eight displaced homemaker projects. These projects were funded primarily by the California Department of Education and California community colleges using State funds. Although all programs serve displaced homemakers, they differ in types of services provided. One project aims to serve the low-income, hard to reach person. Occupational training and supportive services are integral program components. Another project emphasizes community and college teamwork in meeting the displaced homemaker's needs. Counseling, career planning, and occupational training are provided. Job placement and followup services further aid the displaced homemakers. Still another project takes a different focus by providing special workshops on problems women face in trade apprenticeships. The project facilitates placement of women in apprenticeships as well as providing on-going support for those placed.

Florida is also exploring how it can best use vocational monies to aid displaced homemakers. At one junior college, the Vocatioanal Home Economics Department utilizes a workshop approach to reach out to displaced homemakers. Planning committees of concerned women organized workshops entitled "A Day For Women." Six hundred women attended the workshops held in five locations. The workshops focus on building family strength and continuing education for women. Pertinent topics discussed include Women and the Law, Changing Family Roles, Building Self Esteem, Finding a Job, and Looking at Non-Traditional Roles. An interest inventory was also prepared for participants.

Idaho is taking a close look at how its displaced homemakers can best be served. At the University of Idaho, an exploratory workshop was held on the special needs of the displaced homemaker and the aging. Workshop objectives were to identify the displaced homemaker, the problems they face, the process of aging, and the support systems available.

In Kentucky, Owensboro Public Schools established a Displaced Homemaker Center in March 1978 to provide job counseling, training, and placement services for the large number of women who will be entering the job market in the Daviess County area. The program is closely allied with the following programs: (1) the Adult Learning Center in the completion of a high school education; (2) Homemaker's Heaven (the adult consumer and homemaker drop-in center) in the study of health care, nutrition, personal grooming, consumer education, and financial management; (3) the Parent-Child Program, which provides educational and day care services for parents and their children;

(4) the Teen-age Parent Program, which makes referrals to social service agencies and other supportive programs; (5) the Adult Education Program (provided by the Owensboro Board of Education and the Bureau of Vocational Education) which provides upgrade training and skill development; and (6) Federal, State, and local training programs, such as CETA.

By early September 1978, after 4 months of operation, Louisiana's pilot center for displaced homemakers in New Orleans had enrolled 81 participants. In that short time, the center had produced results as well as enrollments.

A counselor helps the entering displaced homemaker assess his or her needs and resources. Based on this, an individual plan of action is prepared. The plan may call for immediate employment, special assistance from social agencies, vocational training at a nearby school and/or workshops.

A workshop series is offered monthly. Basic courses include Self Evaluation, Interview Techniques, The Cost of Work, Job Search, and Assertiveness Training.

The center is striving to set up special internships for those needing them. While some women can be placed directly on the job, others need the special guidance which can be given in an internship. The center is operated by Louisiana's Bureau of Women with State VEA funds.

In New York, displaced homemakers were served along with other homemakers in adult classes held in 70 urban and rural locations and funded by VEA consumer homemaking monies. As displaced homemakers develop skills and self confidence through these programs, they are assisted in identifying their aptitudes and are encouraged to seek employment or training.

Staff members work closely with community groups and agencies to locate specific services for participants. Local programs are coordinated by home economics educators supervised by the Bureau of Home Economics Education in the State Department of Education.

In Ohio, six pilot programs were established in 1978-79 representing a statewide effort to determine the most effective way existing vocational education delivery systems can respond to the unique needs of displaced homemakers. These programs are being carried out by the Vocational Home Economics Section of the Department of Education's Division of Vocational Education in cooperation with the State sex equity office. The six programs were selected from proposals submitted by joint vocational schools and other educational facilities throughout the State. Funding is provided through a combination of vocational education money matched by the local participant. All pilot sites offer a variety of adult training classes and have established good working relationships with community agencies such as CETA and YWCA -- prime criteria for selection. Each program is headed by a special coordinator.

The overall program is headed by a State program developer, who meets regularly with the six local coordinators to plan programs which may be duplicated as needed throughout the State.

To help homemakers meet their goals, a number of self-help modules have been developed by the program coordinators. These include modules designed to raise self-esteem, to strengthen decision-making and goal-setting skills, to help in understanding legal rights, and to provide information needed to make consumer decisions. A special module on employability provides for career exploration of both traditional and nontraditional jobs, stresses job-seeking techniques such as resume preparation and interviewing, and develops skills for getting along on the job. Evaluation instruments are being designed for use in gathering pertinent data to enrich the ongoing programs and to strengthen the model for future programs.

Tennessee's pilot program, called "Homemakers - Back to Work Model Program" has the following goals: (1) to explore the world of work, (2) to provide counseling to help the displaced homemaker to become more self-sufficient and independent in securing employment, (3) to develop specific job and related skills and upgrade participants' present employment skills, and (4) to assist participants in placement in satisfactory jobs.

Sponsored jointly by the State Vocational Education Department and Metropolitan Nashville Public School Vocational Education Department, the program began operation on May 1, 1978. The agency is housed in a centrally located technical high school, utilizing existing office and classroom space.

Recruitment of clients has been accomplished by contacting various agencies such as YWCA, PTA, Social Services, and CETA. However, public service announcements via local television have succeeded in reaching the largest number of displaced homemakers. The client list after 2 weeks of public broadcasting equalled that of all recruiting techniques for the 12-week period preceding the announcements.

In early September, after 3½ months of operation, 44 displaced homemakers (only one of whom was male) had been processed by the agency. More than one-fourth of this group was already in the job market. Eight were undergoing further training. Four had withdrawn from the program. The remaining applicants were interviewing for jobs and continuing to work with the agency.

Residential Vocational Schools

Previous vocational legislation authorized Federal funds, under a separate section, for construction and operation of residential vocational schools. Even though authorized, Federal funds were not appropriated to carry out this provision. However, several of the States have provided residential vocational school facilities over the years by using State and local funds for construction and some Federal funds provided under other sections of the act for instruction.

The 1976 Amendments authorize each State and Territory use of Federal funds under the basic grants for construction, purchase of equipment, and operation of residential vocational schools. During school year 1977-78, $894,200 of Federal vocational funds and $1,895,081 of State/local funds were expended for residential vocational schools.

Program Improvement and Supportive Services

P.L. 94-482, subpart 3, section 130, authorize grants to the States to assist them in improving their vocational education programs for use in accordance with the 5-year State plans and annual program plans.

Section 110 requires States to use at least 10 percent of the Basic grant and Program Improvement funds to serve handicapped students, at least 20 percent to serve disadvantaged students and at least 15 percent to serve postsecondary and adult students. Expenditures for these national priorities may be made under any or all of the following six legislative purposes.

Research -- Improving the quality of vocational education is an important element in the State's Programs of Vocational and Technical Education. Research is needed in all aspects of developing and testing curriculum materials. Applied research in diverse areas is important for the maintenance and improvement of the quality of vocational education. Projects funded under this authority assist programs at all levels in virtually every type of institution.

The 1976 Education Amendments require each State Research Coordinating Unit to develop a comprehensive plan for program improvement. The plan must include the intended use of funds available, a description of the State's priorities for program improvement, and the procedures to be used by the research coordinating unit to insure that the findings and results of the program improvement activities in the State are disseminated throughout the State.

A major difference between the Vocational Education Amendments of 1976 and those of 1968 is the consolidation of research, exemplary, and innovative programs, and curriculum development into a single category. Whereas each of these activities in the past had categorical funding, under the new Amendments, the State Plan sets forth how funds are to be expended. States may use the funds under the 1976 Amendments to support the administrative cost of the Research Coordinating Units. In addition to contracts, a Research Coordinating Unit may accomplish its activities internally with State Agency Staff.

All contracts for Research and Curriculum Development which are made by the States must demonstrate reasonable probability that they will result in utilization of materials in a substantial number of classrooms or improve teaching techniques within 5 years after completion of the contracts.

As a result of the Education Amendments of 1976, State-level administration of research, exemplary, and curriculum development programs has been much better coordinated. In most States, these three are administered by the same person. This appears to produce considerably better results than does a coordinating committee. The requirement emphasizing utilization of materials is relatively easy to comply with, and it has had the beneficial effect of forcing the researcher to think seriously about dissemination activities.

Research Coordinating Units, under the authority of section 131, utilized funds for experimental, developmental, and pilot programs.

During 1978 emphasis was placed on improving the accessability and the availability of vocational education programs at the State levels.

At the same time, a number of States funded programs and projects to overcome problems of sex bias and sex stereotyping. Projects in this category included Sex Bias Stereotyping in Management and Sex Fairness Resource Materials (Maryland), Development and Pilot Testing of a Model To Create an Awareness of Sex Bias and Sex Stereotyping in Vocational Education (Texas), and Development of a Model to Identify Vocational Education Needs Associated with Sex role Stereotype with Special Target Groups (Florida). In addition, efforts were made to eliminate sex bias and stereotyping in all instructional materials.

Funds were also utilized for projects designed to identify new careers requiring less training than professional careers and to delineate within such occupational areas jobs with the potential for advancement from one level to another. Projects exemplifying this included Current and Future Employment Opportunities in New and Emerging Occupations within Illinois (Illinois), Engineering Technology Modules (Maryland), and Manual of Competency Matched Instructional Resources for Developing Coal Mining Curriculums (Illinois).

Still other activities funded under section 131 involved projects for the training, development, and utilization of public service aids. Some of these projects tested the usefulness and effectiveness of providing alternative work experiences. Projects under this category included Career Seminars in Business, Industry, Government, and Service Occupations (Missouri), Placement and Followup of Vocational Education Graduates (Idaho), and Business, Labor, Industry and Government Workshop for Counselors (Indiana).

Dissemination activities designed to spread the results of vocational education projects received support from the States. Some of these included the Catalog of Innovations Development (Florida), and the Research Familiarization Project for Idaho Office Occupations Teachers (Idaho).

Exemplary and Innovative Programs -- There are many urban and rural segments of the Nation remaining whose populations are not provided with adequate opportunities for vocational and technical education. In an attempt to overcome this problem, section 132 authorizes funds to be spent on programs to develop high quality vocational education programs for urban centers and rural areas. Projects that were funded under section 132 show promise of or exhibit high quality that will enable them to serve as models for the vocational education community. Projects of this type funded in 1978 included, "C.E.T.A. -- How to Get Involved" (Illinois), "Exemplary Program for Individualized Instruction in Distributive Education in Mississippi", "Development of a Model Preparatory Business Program for Educationally Disadvantaged Students" (North Carolina), and "Identification of Innovative Approaches to Vocational Education in Urban Areas" (Illinois). These programs were targeted towards economically disadvantaged individuals, unskilled workers, and unemployed individuals.

Emphasis was also placed upon programs to provide effective vocational education for persons of limited-English-speaking ability. Programs such as: "An Assessment of Needs, Programs, and Instructional Resources" in Kentucky, as well as three projects supported by Texas, "Vocational Oriented Remedial Reading Program for Limited-English-speaking", "Increasing Occupational Awareness in Middle School Students/Limited-English speaking Ability", and "Bilingual Education for Occupational Research and Evaluation".

The establishment of cooperative arrangements designed to correlate vocational education opportunities with current and projected needs of the labor market were also encouraged. Such projects as, "Consortium of Vocational Educators and Employers" (Illinois), "Vocational Technical Education Consortium of States" (Florida), and the "Yavapai County Plan for Vocational Education" (Arizona) are attempts to provide systematic and rational approaches to vocational education services.

Another category of programs includes projects designed to broaden occupational aspirations and opportunities for youth. In these projects emphasis is placed upon youths who have academic, socio-economic, or other handicaps. Projects of this sort include the "Demonstration Model for the Students, Teachers and Parents in the World of Careers" (Arizona), "Continuation and Expansion of BEDA - Vocational Exploration: A Developmental Approach for Junior High School" (Pennsylvania), "Providence Vocational Education Program for the Handicapped Students in Occupational Education: A Model" (Illinois), and "Replicable Model for Bias-Free Reading Materials to Broaden Awareness of Careers for Potential Vocational Students" (Maryland).

These projects, although administered on a State level, are available for replication or adaption anywhere in the country. Information about these projects is contained in the bi-monthly publication Resources in Vocational Education, and a wide audience is aware of the work in progress.

Curriculum Development -- Section 133 permits States to contract for Curriculum Development work to be performed. When a State does contract for curriculum development and dissemination, it must also develop a unified planning strategy which will tie together research, demonstration, and curriculum development purposes. Each State's Research Coordinating Unit consequently made contracts for work funded under section 133 and for improved, revised and new curriculum materials development funded under section 131, research.

Several States felt a need for improved curriculum management. Wisconsin, for example, funded a project to develop a management system for curriculum development. Indiana funded planning for a 3-year effort in curriculum modification consistent with job market trends. Florida contracted for activities leading to strengthened coordination of vocational curriculum development, and Pennsylvania supported a project to evaluate funded projects for the development of vocational instructional materials.

There also was considerable developmental work undertaken in areas of competency/performance-based instruction. Much of this work was occupation-specific such as nursing assistant (West Virginia), machining trades (Indiana), and legal secretary (New Jersey). Wisconsin funded a project to articulate competencies developed in high school business occupations programs with competency-based business education in technical institutes; and Indiana made a contract to improve cable TV by performance-based instruction.

State Program Improvement Projects especially targeted curriculum for changing occupations in the States. Among these were: Careers in Criminal Justice (Missouri), Employer-based Automotive Training (Kentucky), Core Curriculum in Electronics (North Dakota), Health Occupations Curriculum Guide (Massachusetts), and Engineer Services (Illinois).

Projects for the development and dissemination of materials for new and emerging occupational areas in the States were described by eight States Among the awards made were: Pennsylvania - Petroleum Production Oil Field Worker; Washington - Industrial Electricity; Kentucky - Diesel Mechanics; Minnesota - Retro-fit Energy; Maryland - Aviation/Avionics; Texas - Vocational Gemology; Illinois - Land Reclamation and Mining; and Wisconsin - Laser Technology.

A limited number of curriculum projects funded by the States specifically targeted the needs of handicapped, disadvantaged and limited-English-speaking individuals and problems of sex bias and sex stereotyping. Among the curriculum specific projects were: "Performance-Based Multi-Media Instruction in Ten Vocational Areas for Disadvantaged Students" (Florida), "Learning Activity for the Handicapped" (Maine), "Audio-Visuals for Special Needs Students in Occupational Home Economics" (North Dakota), "Computer-Assisted Reinforcement Training for the Handicapped and Disadvantaged" (Washington), "Sexfairness Resource Materials" (Maryland), "Revision and Development of Materials To Increase Awareness of Sex Bias and Sex Stereotyping in Vocational Education" (Texas), "Survival Skills and Curriculum for Billingual Vocational Education" (Illinois), and "Programmed Texts for Persons with Reading Deficiences" (Indiana).

Mention also should be made of the consortium approach to curriculum development and dissemination which is leading to improved use of State resources. As a result of research findings from a series of projects funded by the U.S. Office of Education, 18 States were using the 18 task analyses and performance objectives process developed by V-TECS (Vocational Technical Education Consortium of States). Associate members of V-TECS include the Air Force, the Army, and the Navy. The Executive Secretary of the College and Schools, sponsor of V-TECS, reported that 52 catalogs of performance objectives were available in 1978, and 41 others were in process.

Another curriculum development consortium of States grew out of common needs identified by State Liaison Representatives to the federally funded Midwest Curriculum Coordination Center located in Oklahoma. The Mid-America Vocational Curriculum Consortium includes 12 States who share in the development of mutually needed curriculum materials for teachers and for students. Since its founding in 1974, 14 curriculum titles have been developed and disseminated. Among the most popular titles are Diesel Engine Mechanics and Air Conditioning and Refrigeration. Three new titles are scheduled for production in 1979.

The Interstate Distributive Education Curriculum Consortium (IDECC) is supported by 22 State vocational education agencies. Its system originated out of a federally funded research project on a Competency Pattern Approach to Curriculum Construction in Distributive Teacher Education. IDECC offers Learning Activity Packages (LAPS) for over 100 marketing and distribution occupations, a computer printout system which articulates LAPS with existing distributive education curriculum and student competency records. According to IDECC's Interim Director, 23 LAPS for economics in marketing, which will build into entrepreneurship training programs, were scheduled for release in 1979.

Guidance and Counseling

Section 134(a) authorized that not less than 20 percent of the funds made available to States for Program Improvement and Supportive Services be used to support vocational development guidance and counseling programs and services which include the following:

1. Initiation, implementation and improvement of high quality guidance and counseling programs and activities;
2. Vocational and educational counseling for:
   a. Children, youth, and adults;
   b. Youth offenders and adults in correctional institutions;
   c. Those with limited-English ability.
3. Establishment of vocational resource centers to meet special needs of out-of-school individuals; and
4. Leadership for vocational guidance and exploration programs at the local level.

If a State chooses to fund 1 or 2a above, it may use these funds when deemed practical to:

1. Bring individuals with experience in business and industry, the professions, and other occupational pursuits into schools as counselors or advisers for students;
2. Bring students into the work establishment of business and industry, the professions, and other occupations to acquaint students with the nature of work accomplished therein; and
3. Enable guidance counselors to obtain experience in business and industry, the professions, and other occupational pursuits which will better help those counselors to carry out their guidance and counseling duties.

The Adult Urban Guidance Center concept continues to show promise for assisting youth and adults from special needs groups (disadvantaged, handicapped, minorities, and/or women) who are in transition. A "working paper," prepared on these centers, has received wide dissemination and use. This working paper provided backup information for the monograph, "Urban CETA-Based Guidance Services," published by the National Center for Research in Vocational Education.

Civil rights legislation was studied and files were prepared and later updated for office use. Emphasis was given to legislation relating to rights of the handicapped and sex equity. An annotated bibliography, resulting from an ERIC search, was prepared on guidance and counseling and sex equity.

At the request of the U.S. Commissioner of Education and with the encouragement of the Assistant Secretary of Labor, an OE/DOL/ETA working group was formed to enhance guidance, counseling, and placement services for youth in transition. The working group describes its efforts as the OE/DOL Venture and periodically explores ways of working together and avoiding duplication in providing these services.

Planning strategies were submitted for monitoring proposals and evaluating vocational development guidance and counseling programs and projects funded at the national and State levels.

Below are descriptions of several "model" local guidance or guidance-related programs which were initiated and developed in FY 1978.

PR-1 Special Needs Program, Fort Collins, Colorado, is for students in grades 7-12, who are economically, culturally, academically, and socially disadvantaged. It includes/involves special counseling, student advocacy, home visitations, home-school liaison and other special/unique services. The high school vocational work/study program includes job programs which complement the vocational classes.

Job Development and Placement Services, Dundal Community College, in Maryland is a project which demonstrates how cooperation between a vocational instructor, a guidance counselor, a paraprofessional job developer can bring about effective job development and placement.

Also in Maryland, the Counselors Acting for Transition program is designed to provide personal adjustment and vocational counseling to economically disadvantaged work-bound juniors and seniors in the nine counties on the Eastern Shore and the three counties in Southern Maryland.

The Pontiac Career Education Department is under grant with the Michigan Department of Education to conduct Phase II of the Career Guidance Inservice Training Project. Workshops were designed for teams consisting of counselors, teachers, and administrators. The workshops were designed to give local teams skills in planning, developing, and implementing career guidance programs. The major goals were to assist local districts in identifying student and counselor needs; deliver skills to teams of administrators, counselors, and teachers to enable them to plan, develop, implement and evaluate career guidance programs; and provide followup and evaluation services to Career Guidance Teams. The project will produce a Case Book of Successful Practices in Career Guidance.

The Vocational Career Guidance in Rural Nevada project provides vocational guidance services for students in the State's rural areas. It is an exemplary program which centers around an itinerant guidance counselor. The major emphasis for this phase of the program is the development of new approaches to vocational counseling, monitoring that development, and evaluating the program to provide a basis for its continuation in the various school districts.

Programs in Guidance and Counseling in New Jersey produced a kit which provided briefs on several programs. Each brief included an overview, essential elements of the program, goals, evaluation, design, results, implementation, dissemination services and materials and contact person. Some model projects included:

--A Model for the Evaluation of Guidance Services, Woodbridge

--Decision-Making Through Curriculum In-Service, Newark

--Counselor Training and Retraining, Monmouth Junction

--Project GROW

--Group Guidance, Madison

--Decision Making--Ninth Grade Students, Camden

--Comprehensive Secondary Guidance and Counseling Program

--Senior Citizens and the School, Cape May Court House

The Job Placement Program, Lenoir, N.C., is an informal approach involving one counselor and five high schools in the County. The project was a direct outgrowth of a large Federal Career Education project conducted in Coldwell County. The counselor spends 1 day a week in five schools working with youth to place them on jobs.

Twenty-four exemplary vocational guidance projects were funded in the Commonwealth of Virginia. Twelve of the projects were designed to increase sex equity in vocational guidance and vocational education programs, and 12 were designed to encourage business/guidance exchange of personnel and information. A packet has been prepared which contains brief abstracts of each exemplary project. Each abstract includes the project's objectives, methodology, and the name, address, institutional affiliation, and phone number of the project director.

Grants to Overcome Sex Bias

Under section 136, Grants to Overcome Sex Bias, States may use funds "to support activities which show promise of overcoming sex stereotyping and bias in vocational education." Through grants from the State agency, local educational agencies are funding sex equity programs and projects. These projects range from those to create awareness of the problem of sex bias to those actually designed to train women or men in non-traditional areas. Hawaii, for instance, has begun awareness training for students by developing "mini-sessions" on the problems with sex stereotyping. These mini-sessions are designed to be used within one class period (45 minutes to 1 hour) and are based on comparisons of Cinderella/Prince Charming with Today's Woman and Man. These mini-sessions have been so successful with the students that they have been expanded for faculty use as well.

New Jersey has taken steps to creat awareness for teachers, students, and the community in general. "Project Freedom" in Middlesex County is a van which has been redecorated and stocked with media and print materials on career education. There are various learning stations within the van, aimed mainly at elementary school children. There are, however, workshop materials and career materials for adults, too, so that teachers as well as their students can use it. The van travels from school to school, and when it is not in use in the schools, it travels to shopping centers and libraries and other places where the general public can avail itself of the information.

Vocational monies are also being used to support programs to recruit students into areas not traditional for their sex. In Ohio, a program to encourage enrollment in non-traditional programs is underway. Radio spots are heard as public service announcements on radio stations throughout the State, and a series of mini-posters illustrating men and women in non-traditional jobs have been sent to all schools.

Knoxville, Tenn., has a program which is actually training women in non-traditional areas. Seventeen women have been selected to participate in a program to train them in electronic and electric equipment maintenance. The 15-month program will involve classroom and on-the-job training, and employers will help conduct the training.

These are but few examples of work that is going on in vocational education throughout the country as vocational educators find new ways to eliminate the problems of sex bias, sex discrimination, and sex stereotyping.

SPECIAL PROGRAMS FOR THE DISADVANTAGED

The Education Amendments of 1976 (sec. 140) continue the special authorization for 100 percent Federal financing of special programs for the disadvantaged which was begun under the 1968 legislation. A provision was added which requires such funds to be allocated within the State to areas of high concentrations of youth unemployment and school dropouts. The funds under this section are to be used to pay the full cost of vocational education for disadvantaged persons. The appropriation has remained at $20 million for each of the years since the 1968 act was in effect and in the succeeding years under the Vocational Education Amendments of 1976.

An estimated 164,000 disadvantaged students were enrolled in special programs for the disadvantaged in 1978. Available data are not sufficiently detailed to allow an anlaysis of how these special needs funds are spent or the characteristics of students enrolled in special programs and services. Available data are also difficult to analyze because some States have included the disadvantaged students as part of their occupational reporting figures; others have kept the information separate.

Some information is available on exciting and useful programs and activities in operation which have enabled the disadvantaged to remain in regular vocational education classes or to receive vocational instruction. For example, payment of the salaries of remedial instructors, allowing overtime for vocational teachers, providing special instructional materials, or storefront rentals have helped disadvantaged students to participate in the regular vocational education programs and overcome academic or economic handicaps. In a few situations, special classes for dropouts have been set up, and vocational instruction offered in correctional institutions.

CONSUMER AND HOMEMAKING EDUCATION

Federal funds for consumer and homemaking education are authorized and allocated to the 57 States and Territories on a formula grant basis solely for (1) educational programs and (2) ancillary services and activities which assist in the preparation of males and females, youth and adults for the occupation of homemaking. From the Smith-Hughes Act of 1917 to the Vocational Act of 1963 and the subsequent amendments of 1968, 1972, and 1976, this evolving legislation has focused upon developing occupational competencies which meet the needs of persons in the society by improving their quality of life, home environments, and enhance their potential employability.

The occupation of homemaking requires the knowledge and skills that are interrelated and necessary for optimum quality of life for individuals and families. Values, management, and interpersonal relationships are major concepts that unify the content of the educational programs in consumer and homemaking education. The instructional programs, services, and activities which assist in preparing youth and adults, males and females at all educational levels for the occupation of homemaking include but are not limited to instruction in (1) consumer education, (2) food and nutrition, (3) family living and parenthood education, (4) child development and guidance, (5) housing and home management (including resource management), and (6) clothing and textiles which (A) encourage participation of both males and females to prepare for combining the roles of homemakers and wage earners: (B) encourage elimination of sex stereotyping in consumer and homemaking education by promoting the development of curriculum materials which deal (i) with increased numbers of women working outside the home, and increased numbers of men assuming homemaking responsibilities and the changing career patterns for women and men and (ii) with appropriate Federal and State laws relating to equal opportunities in education and employment; (C) give greater consideration to economic, social, and cultural conditions and needs especially in economically depressed areas; (D) encourage outreach programs in communities for youth and adults giving considerations to special needs such as, but not limited to, aged, young children, school age parents, single parents, handicapped persons, educationally disadvantaged persons, and programs connected with health care delivery systems, and programs providing services for courts and correctional institutions; (E) prepare males and females who have entered or are preparing to enter the work of the home; and (F) emphasize consumer education, managment of resources, promotion of nutritional knowledge and food use, and parenthood education to meet the current societal needs.

Ancillary services and other activities which assure quality of all consumer and homemaking education programs are fundable under the 1976 Amendments. Ancillary services and activities include support of:
(a) State and local supervisory staff who provide leadership for program development and for the Future Homemakers of America, the vocational student organization which is an integral part of the instructional program;

(b) preservice and inservice education for teachers through workshops, conferences, and individual consultation; (c) curriculum development with special emphasis on consumer education, nutrition education, family life and parent education and programs for the disadvantaged and handicapped, particularly the economically depressed; (d) research, pilot-demonstration programs, evaluation with leadership development for graduate students and (e) start-up of innovative programs in consumer and homemaking education.

The 1976 Amendments require that at least one-third of the Federal funds made available to each State under this section be used in economically depressed areas or areas with high rates of unemployment for programs designed to assist consumers and to help improve home environments and the quality of family life.

Total enrollment in consumer and homemaking education programs increased 25.1 percent between 1972 and 1978. In 1972, the enrollment totaled 3,165,732, and in 1978 it was 3,959,441. Eight percent of the total enrollment in 1972 were males, whereas in 1978 males made up 19.5 percent of the enrollment. Some selected States which reflect the continual increase in number of males being served by consumer and homemaking education programs include Texas and Oregon -- 24 percent males, California -- 20 percent, New York -- 19 percent, and Maryland -- 24 percent.

Curriculum revisions in consumer and homemaking education on State and National levels since 1972 have made the programs more flexible and appealing to males as well as females and to youth and adults, thus reflecting a steady growth in enrollments in all instructional areas. (See table 26.)

Consumer Education is one of the specialized programs that has been expanded in many States as quarter or semester length programs. The enrollment in consumer education has more than doubled from 102,055 in 1972 to 277,105 in 1978.

In Ohio, the home economics educators on the staff of the State Department of Education have been designated leaders of a State-wide program in consumer education mandated by the State assembly. Curriculum materials, K-12, have been developed under their leadership and used by elementary and secondary teachers.

In Washington and Georgia, for example, teams of teachers from local school districts have participated in workshops, developed curriculum materials, and initiated interdisciplinary programs in consumer education in their schools. In Georgia, curriculum materials serve teachers, grades K-12.

Postsecondary enrollments in consumer and homemaking education have also more than doubled from 30,723 in 1972 to 72,340 in 1978. In Georgia, a semester or quarter length course in Consumer and Family Life Skills is required of all students in the postsecondary area vocational-technical schools. Groups of students enrolled in electronics, mechanics, business education, or practical nursing, for example take this course which is especially adapted to their needs.

TABLE 26: CONSUMER AND HOMEMAKING ENROLLMENTS, BY INSTRUCTIONAL PROGRAM

(Program Years 1972 and 1978)

Instructional Program	Enrollments	
	1972	1978
Consumer and homemaking (Total)	3,165,732	3,959,441
Child development	138,589	260,252
Clothing and textiles	365,659	365,456
Family relations/parenthood	190,397	264,117
Consumer education	102,055	277,105
Food and nutrition	222,552	427,769
Home management	55,897	97,682
Housing and home furnishings	105,296	161,567
Other	1,992,540	2,105,493

In Kentucky, a similar offering is available as a non-credit seminar for students in the community colleges and two area vocational schools. Consumer education, preparation for parenthood, relations, and job responsibilities are topics discussed. Mini-courses of one to three sessions are also popular with these students focusing on such topics as, "A Look at Myself," "Choosing a Place to Live," "Income Tax," "Dual Role for the World of Work." Industry and business representatives have indicated that students who go through these courses are better employees.

The Future Homemakers of America, vocational home economics education student organization, is an integral part of consumer and homemaking education programs. It assists youth in gaining additional abilities, in taking responsibility, and in developing leadership skills. Over 450,000 males and females in junior and senior high schools participate in specialized programs and projects.

In all States, preservice and inservice programs are supported by and include activities such as workshops, conferences, inservice courses, consultant services from State supervisors and teacher educators. Various media help home economics teachers improve their competence in working with youth and adults.

Food and Nutrition Education has been given an added impetus partly as a result of the White House Conference on Food, Nutrition and Health, partly from reports of malnutrition in recent nutritional status surveys, and also from legislation encouraging promotion of knowledge of nutrition as part of the Vocational Education Amendments of 1976. Enrollment in foods and nutrition has expanded from 222,552 in 1972, to 427,769 in 1978.

In Oklahoma, staff members in home economics education in the State Department of Education and the State Welfare and Public Health Departments cooperate in a number of projects. Home economics teachers also help with nutrition education programs in elementary schools. In St. Paul, Minn., a nutrition educator has been added to the school district administrative staff. Her responsibilities are to develop curriculum materials and work with teachers to provide nutritional education for all students, grade K-12. Secondary students in Iowa schools found the study of nutrition meaningful when they recorded and evaluated the basic food and snacks they had eaten for 2 days.

Parent Education Programs in Washington State are designed to offer experience to parents to become directly involved in the education of their children as well as to assist them in their control over their own education. A preschool laboratory is supported by consumer and homemaking education funds in cooperation with the parents who are responsible for hiring the teacher, with assistance from the local school system. Parents, for example, help plan activities to coincide with their own predetermined needs and are also in a cooperative learning effort with their own children.

Parenting classes at Okaloosa-Walton Junior College, Fla., is a joint effort between the College and the County Department of Social and Economical Resources (welfare department) to offer parenthood classes to parents whose children have been removed from their home due to child abuse or child neglect. The children have been placed with approved foster parents until they have participated in classes which assist them in the necessity and importance of being a natural parent, the importance of a "good" self-concept as a parent, and the ways of meeting the basic needs of young children; e.g., nutritional meals, nurturing of children of all ages, and the need for adequate rest of the young child. In the meantime, the foster parents are also given either prior to or during the time they are caring for the abused child, classes on child care techniques, principles of child care and growth, etc.

Ohio's Family Life Education programs are composed of two major types of programs: (1) "Infant Stimulation" or often referred to as the "Parent/Child Interraction" which was designed to promote and utilize not only the consumer and homemaking education facilities and teachers, but to involve other agencies or organizations in assisting parents with infants who have special problems, mental or physical. For example, the "Infant Stimulation Program" has made an impact in sites such as the Children's Hospital in Akron; school age parents in Zansville, Toledo, and Youngstown. All these cities had a "well baby clinic" which was utilized for training purposes in addition to the secondary and adult laboratory facilities. In one community, the Southeast Community Action, Canton, donated the use of a van and a driver to transport parents and their children to the Infant Stimulation Center in order that parents could benefit from this program, (2) "Two Way Street," which has been most successful in Ohio, included a series of television programs and a set of 12 films which were used to reinforce the Infant Stimulation Program. In these two programs, approximately 9,039 adults were involved formally and over 2,300 infants participated; in addition, 2,063 school age children benefited. Of the adults involved in the formal program, 631 were males, 6556 females--this was only in the Infant Stimulation Program.

St. Cloud, Minn., initiated a "Family Oriented Preschool Activity" where parents and children learned together, with emphasis on parenting as a vocation. In 1977, the preschool program served about 450 parent-child teams.

In Texas, sequence and specialized program components contributing to education for parenthood were given more visibility. The consumer and homemaking education curriculum was organized around the family, with all areas of the program contributing to betterment of family life and parenthood education. More students were provided opportunities to participate and gain experiences with young children through laboratory activities, home experiences in child development, and volunteer work with public school preschool programs. Some students tutored young siblings and handicapped students. Child abuse recognition and prevention and venereal diseases were studied extensively both by students and teachers in inservice programs. Enrollments grew in these programs, with males accounting for 18 percent of enrollment in the first year and 45 percent in 1977.

Nevada, recognizing the increased number of teenagers who are parents, increased the emphasis on healthy babies and the hereditary and environmental influence on prenatal development by adding more programs in child development and parenthood education. Also developed in Nevada were new curriculum materials dealing with child abuse and neglect, titled "Recognizing and Reporting Child Abuse and Neglect: A Guide for School Personnel" (1977).

Serving Persons in Economically Depressed Areas

Consumer and homemaking education programs increasingly serve individuals and families in economically depressed areas as described in State plans. Thousands of low income and disadvantaged families have gained assistance with individual and family concerns since consumer and homemaking educational programs were expanded under the provision of the Vocational Education Amendments of 1968. In 1972, there were 870,954 persons from economically depressed areas served by these programs, while in 1978 the number of persons increased to 1,825,887 (See table 27.) In junior and senior high schools in these depressed areas, consumer and homemaking teachers are helping students and working with their families on personal development, improving their homes, the use of money and other resources, their management practices, their eating habits, and with the care and guidance of children, and family relationships. They encourage the students to raise their aspiration levels and develop behavioral patterns and attitudes which will help them enter training, become employable, and, as a result, improve their economic status and level of living. Alabama, Arkansas, Illinois, Indiana, North Carolina, Ohio, Texas, and Virginia are among the States where teachers have developed adaptations as a part of their regular consumer and homemaking programs in working with students from economically depressed areas with cultural differences. Migrant families in the Portland, Oreg., area are reached with consumer and homemaking through the use of a mobile instructional classroom which is moved along with the teacher, a bilingual aide, and instructional materials from camp to camp. In Detroit, Mich., a "Forum for Families" is offered for youth and adults in three of the inner-city high schools. Five half-days a week for 6 weeks during the summer provide opportunities to gain help with child care and development, effective living, family foods, family clothing, consumer education, commercial foods, and commercial clothing. Over 750 fathers, mothers, and youths participated in the first year. In Montana, workshops for teachers have been offered on "Improving Relevancy of Home-Economics for Indian Youth". Indian mothers serve as consultants in the workshops and as resource people for consumer and homemaking classes in local schools.

Workshops for low-income persons have been offered in various locations in Rhode Island, Florida, and Arizona. Over 50 percent who have participated were senior citizens. The workshops were designed to help individual consumers from low-income families obtain knowledge and information about agencies providing services designed to aid consumers in obtaining maximum benefits from financial resources of the market place. Four low-income communities were selected in Rhode Island: attendance at six open meetings associated with the project was over 800 people with approximately 300 persons attending all six workshops. In Orlando, Florida, 1,100 older Americans are involved in consumer and homemaking education programs 5 days a week with nutrition education and consumer education the major areas of concern. They also receive a hot meal which is prepared by the secondary students in the Orlando area. In Texas, vocational home economics education teachers were located in public housing projects which were designed to assist older Americans to use their leisure time in a profitable way, better understanding consumer education as related to medicare programs and health as well as using a limited income to improve nutrition and dietary habits. In Atlanta, the Federal dollars promoted the development of a program of inservice training for senior citizens in cooperation with the Senior Citizens, Inc., and Model Cities of Atlanta. The program consisted of specialized training in the areas of day care centers and hospitals which promoted a feeling of "being needed" and a "reason to live." The

TABLE 27: CONSUMER AND HOMEMAKING EDUCATION ENROLLMENT BY TARGET GROUP
(Program Years 1972 and 1978)

	Enrollment	
	1972	1978
TOTAL	3,165,732	3,959,411
Target Group		
Female	2,916,987	2,946,101
Male	248,745	1,013,340
Disadvantaged	615,227	-
Handicapped	55,910	-
Levels		
Secondary	1,889,942	2,795,948
Postsecondary	30,723	72,340
Adult		
Preparatory	60,410	86,153
Supplementary	605,101	-
Economically depressed areas	870,954	1,825,887
Coop education (B & G)	2,734	1,687

elderly persons in this program expressed it best with the following examples, "development of the 3R's for the senior citizen, with the meaning Relationship, Respect, and Responsibility for services and to become involved in the needs of the community". The Future Homemakers of America (the vocational home economics education student organization) have conducted a number of specialized projects with the aging correlating their instructional programs with actual living, broadening the youths, males and females, relationship with all segments of society and their views with regard to their own family members.

Serving Handicapped

In 1971, there were 35,833 handicapped students enrolled in consumer and homemaking programs, and in 1972 the number served was 55,910. Of the handicapped students attending the Diagnostic, Adjustive, and Corrective Center for Learning in Portsmouth, Va., 81 percent are enrolled in consumer and homemaking classes. Activities include the study of grooming and personal hygiene, money management, nutrition and simple meal planning and preparation, clothing, care of children, and development of hobbies. Another example is the Coordinated Vocational-Academic Education programs in Texas which are designed for students with special learning needs. Consumer and homemaking teachers operate with other vocational education teachers and integrate instruction in mathematics, science, English, and social studies to be more meaningful than regular courses. As a result, students have reached their maximum in personal development and have become employable in a variety of entry level jobs. Project LIFE (Learning for Individuals, Families, and Employment), offered in Keen, N.H., provides high school girls, who do not participate in regular school programs, with skills so they may take their places in their homes, become a part of society, and enter employment. The State of Florida has also revised its instructional programs and is currently placing more emphasis on serving this special population.

NATIONAL PROGRAMS

Federal Administration

The Bureau of Occupational and Adult Education in the U.S. Office of Education was established by P.L. 92-318, part C, section 1071. The Deputy Commissioner was appointed effective Jan. 7, 1973 and the Bureau was organized May 17, 1973. The Bureau is responsible for:

- the Vocational Education Act of 1963, as amended:
- the Adult Education Act, as amended;
- certain USOE responsibilities relating to the Comprehensive Employment and Training Act;
- vocational, technical, and occupational training in community and junior colleges.

To carry out programs designed to meet these administrative responsibilities, and in particular to meet the requirements of the 1976 Amendments, the Bureau is subdivided into:

Division of Postsecondary Occupational Planning

Division of Secondary Occupational Planning

Division of Research and Demonstration

Division of Adult Education

Division of Vocational and Technical Education

Division of State Vocational Program Operations

CETA Coordination Unit

The Bureau of Occupational and Adult Education also has three staff offices which administer Consumer's Education, Community Education, and Metric Education programs authorized under the Special Projects Act of 1974.

An initiative of major concern was started by the Office of Occupational Planning to develop coordinated collaboration between industry, education, and labor (I-E-L). High levels of youth unemployment and underemployment pointed to the inescapable conclusion that schools were not adequately preparing students with skills to make them employable in today's job market. Increased involvement by business/industry-the employers-and labor in the design of school curricula, increased and continuous linkage and communication between industry, education and labor, and increased exposure of students to the various occupational areas and the job market were all key recommendations following a year of intensive research in remedying this serious situation. To foster this collaboration the Office of Education, through the Office of Occupational Planning, mounted a vigouous effort aimed at promoting such I-E-L linkages.

The Office of Occupational Planning, provided leadership and technical assistance in the development of Industry-Education-Labor Action Councils at the local level. These Action Councils represented the "power structures" of their respective communities and were to assist the schools in developing a total program more responsive to the complex and changing job market and the economic development of the area and to recommend and assist in the development of the I-E-L programs most appropriate for each individual community.

The Office of Occupational Planning initiated a three-pronged plan to promote I-E-L collaboration. First, OOP prepared a USOE policy paper on I-E-L relations and plans for a work statement for the 10 regions, and updated the register of Regional and State Coordinators for I-E-L. Concurrently, the development of an RFP was initiated to launch a project designed to evaluate I-E-L collaboration in terms of improving the quality and accessibility of occupational education for future policy planning. A third prong of this I-E-L thrust included plans to fund four Black colleges to develop strategies for bringing education and the marketplace into phase as a research basis for immediate and future occupational planning.

Although P.L. 94-482 provided for a 50 percent increase in staff, which would translate into 68 additional positions, subsequent appropriation requests failed to provide the necessary resources for implementation.

Vocational Education Data System (VEDS)

Development and operation of a national Vocational Education Data Reporting and Accounting System (VEDS) was mandated by the Education Amendments of 1976, (sec. 161) as amended by P.L. 95-40. The U.S. Commissioner of Education and the Administrator of the National Center for Education Statistics are assigned the responsibility to jointly develop information elements and uniform definitions for such a system by Sept. 30, 1978. This system includes information resulting from the evaluations required to be conducted by section 112(b) and other information on vocational -

students (including information on race and sex),
programs,
program completers and leavers,
staff,
facilities, and
expenditures.

The 1976 Amendments mandating VEDS were preceded by a series of hearings which were held by the House Committee on Education and Labor in the Spring of 1975 to amend the Vocational Education Act of 1963. Volume I of these hearings presented the results of the General Accounting Office (GAO) study of vocational education completed the previous year. The GAO report repeatedly criticized the Department of Health, Education and Welfare (HEW) for failure to require sufficient data to monitor State planning and expenditures of Federal funds. It was recommended that HEW should "increase its effort in the development of vocational information systems that will provide utilization to improve vocational programs." The Department concurred that better labor market data, improved followup data, and data on both race and sex of program participants and completers were needed. Throughout the hearings numerous references were made to the lack of appropriate and comparable data on vocational education in each of the three volumes of hearings.

House Report HR-94-1085 (May 4, 1976) also noted the areas of Congressional concern about improved data. The first area mentioned was "making much more specific the authorized uses of funds and definitions of terms throughout the Act." Other areas of concern were: more detailed State plans and annual accountability reports from States, evaluations of all programs within the State assisted with Federal funds, and followup of program completers and leavers.

The questions to be answered by the vocational education data system were also specified: "Who is being served in vocational education programs? What are they being served? What is being accomplished? And what is the cost?"

Finally, the committee explicitly required that information on vocational students must be reported in the vocational education reporting system by sex and race.

In 1977, the Office of Occupational Planning in BOAE took the lead in planning the legislative mandates, and the activity continued throughout FY 1978. Coordination in the planning and design of the VEDS was achieved through an interagency task force comprised of representatives of the Office of Occupational Planning, the Division of Vocational and Technical Education, and the Planning Unit of the Bureau of Occupational and Adult Education, the National Center for Education Statistics, the National Institute of Education, the Office of Civil Rights, the National Occupational Information Coordinating Committee, the Bureau of Labor Statistics, and the Employment and Training Administration.

After much discussion of universes to be covered and mounting State and Federal agency concern over parameters, a 1-year delay in implementation was requested and subsequently granted with the stipulation that these conditions be met: (1) full implementation by FY 1979, (2) that the additional year be utilized in systems design, and (3) that every effort be made to interface with the Comprehensive Employment and Training Act (CETA) data system with a "hand and glove" fit. A VEDS planning task force was also formed and a feasibility study initiated in selected States to test the capacity of States to obtain reliable, accurate data from local education agencies and postsecondary institutions using the identified data elements and definitions. The study also provided empirical information on the costs of data acquisition both in terms of manpower and dollars.

The results of the feasibility study were reviewed by the National Center for Education Statistics (NCES), all participating States and by Federal staff on BOAE, Office of Civil Rights (OCR), and the National Occupational Information Coordinating Committee (NOICC). Based on their findings and comments, and two public meetings with representatives of 41 States, NCES staff revised all data forms to be sent out to the States. Office of Management and Budget (OMB) clearance for these forms came on Dec. 27, 1978. The forms were distributed to the States on March 2, 1979.

It is clear that Congress intended the Vocational Education Data System (VEDS) to play an integral role in the standardization of reporting and accounting in vocational education so that a meaningful aggregation of data gathered locally and from the States will be possible. Although disagreement and confusion over format and scope of the system forced a 1-year delay in implementation, the VEDS became operational for school year 1978-79.

The VEDS is comprised of two major functional elements -- a reporting system flowing data aggregated at the State level to the Federal level and an accounting system setting record keeping standards at the local or State level for program audit planning and evaluation purposes as mandated in P.L. 94-482. This system is designed to replace the current Bureau of Occupational and Adult Education (BOAE) reporting system and to collect such new data as mandated by the statute cited above.

In the years to come the system is expected to provide the Executive Branch of Government, the Congress, and the public with uniform and more readily available vocational education data which will aid in the assessment of program effectiveness, and identification of problem areas as well as targeting growth areas. The VEDS is thus a viable and much needed resource tool which will provide for greater accessibility and unified reporting of vocational education data.

The National Occupational Information Coordinating Committee

The National Occupational Information Coordinating Committee(NOICC) was created by Congress as a part of the Education Amendments of 1976, section 161.

In 1977, additional legislation (the Youth Employment and Demonstration Project Act - P.L. 95-93) added responsibilities to give special attention to the problems of unemployed youth by encouraging the dissemination and the use of career information and increasing the communication between employers, applicants, and education/training agencies.

The NOICC has four statutory members:

* The Commissioner of Education (USOE)
* The Administrator of the National Center for Education Statistics (NCES)
* The Assistant Secretary for Employment and Training (ETA - DOL)
* The Commissioner of Labor Statistics (BLS)

NOICC represents the four agencies which directly or indirectly produce and use the majority of the information which describe education and work. With this legislation, Congress has provided for a system of occupational information which will be very helpful to many potential users. These include educators, administrators, guidance and counseling personnel, employers, and the many people who are involved with preparing themselves for occupations and careers. In the past there has been a lack of up-to-date, accurate data which describes the world of work. The efficient collection and dissemination of this information has been restricted in the past by a lack of communication among the various agencies which produce, analyze, and use the data.

NOICC has three responsibilities:

1. The improvement of coordination and communication between administrators and planners of education and occupational training programs at all levels, as well as research personnel and employment security agency administrators;
2. The development and implementation of an occupational information system (OIS) which shall include data on occupational demand and supply based on uniform definitions, standardized estimating procedures, and standardized occupational classifications, and
3. The providing of technical and fiscal assistance to State Occupational Information Coordinating Committees (SOICCs).

The State Occupational Information Coordinating Committees

The State Occupational Information Coordinating Committees (SOICCs) were also mandated by the 1976 Education Amendments, which stipulates that every State which receives assistance from that Act or from the Comprehensive Employment and Training Act of 1973 (CETA) shall establish a SOICC.

The SOICC is composed of representatives from:

- the State Board of Education,
- the State Employment Security agency,
- the State Manpower Services council,
- the agency which administers that State's Rehabilitation program.

Most States have an inter-agency agreement already in effect which was signed in 1978 by the SOICC statutory agencies. This document delineates the goals and objectives which the committee members have set in order to accomplish their purposes. The inter-agency agreement also includes the committee's by-laws and organization. In some States, this inter-agency agreement is augumented by the Governor's executive orders and the actual State legislative mandate.

Each SOICC has an executive director and a secretary whose salaries are funded through NOICC assistance grants. SOICCs also receive funding for special projects from the NOICC.

The following is a list of the activities carried out by the SOICC:

1) Identify occupational data needs and requirements,
2) Inform primary user groups (vocational education administrators and planners, CETA Prime Sponsors, etc.) of existing sources of occupational data,
3) Work with planners and administrators of human resource programs to prevent duplicative and costly ad hoc methods of developing occupational data,
4) Acquaint user groups and data producers with the latest techniques and methods for developing, analyzing, disseminating, and using occupational information,
5) Assist data producers and users in adopting common geographical areas,
6) Coordinate the development of timely occupational data with that point in the planning cycle when these data are needed,
7) Coordinate with the NOICC in the establishment of standardized concepts, definitions, and methods to insure comparability of occupational data across State and local areas, and
8) Coordinate OIS development with the Vocational Education Data System (VEDS) being developed concurrently.

In FY 1978, the NOICC staff and resources were directed to the establishment of a SOICC in the States and the development of requirements for an Occupational Information System to serve the occupational information needs of vocational education and employment and training programs.

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SOICCs were established in 47 States, including the selection of SOICC Chairman and Executive Directors and the issuance of grant funds to provide for administrative support of the SOICC. This was accomplished through a series of regional meetings to explain the legislation and responsibilities of the States and followup meetings with the staffs in each of the States to plan and take appropriate actions to establish a functioning SOICC. Policies and procedures were developed for basic grants which were issued to each State in which a SOICC had been established and had developed a NOICC approved operating plan.

SOICCs were also provided grant funds to conduct a Statewide inventory of occupational supply and demand information and to determine requirements for a State system that would serve State needs and provide common and uniform data to a national, State, and local system. (See table 28.)

State requirements were summarized and a draft framework for developing an occupational information system was initiated and will be published to provide guidance to all States.

The NOICC/SOICC plan for the development and implementation of Occupational Information System(s) is based on the policy that the NOICC will not become a primary data collection agency. This means that neither NOICC or SOICC will initiate any major data collection efforts on their own. To the extent possible, programs that entail the collection of data will be operated by the responsible agencies. Plans have been initiated to develop career information components.

NOICC also developed training plans for NOICC/SOICC staffs which will be carried out in FY 1979, including training in the Occupational Information System (OIS) framework, the relationship between vocational education program codes and the major occupational information classification systems, and SOICC administration and management. NOICC also established resource groups of State SOICC Directors and Federal Agency Officials to provide advice and guidance relative to NOICC program activities.

Vocational Education and CETA

A major purpose of the Vocational Education Amendments of 1976 is to assist the States in improving planning for the use of all resources available to them for vocational education and manpower training. One of the co-equal purposes of the Comprehensive Employment and Training Amendments (CETA), P.L. 95,524, is to provide the maximum feasible coordination of CETA plans, programs, activities with related activities such as vocational education, economic development, and other social service programs. The intent of Congress in these statements of legislative purpose is clearly to assure that cooperation and coordination between the two programs take place.

TABLE 28: NATIONAL OCCUPATIONAL INFORMATION COORDINATING COMMITTEE (NOICC) USE OF FUNDS

GRANTS TO SOICCS	FY 1978 ($M)	FY 1979 ($M)	FY 1980 ($M)	FY 1981 ($M)
Occupational Information Systems	0.02	1.39	0.73	0.75
Assistance to SOICCS	5.60	6.15	6.15	6.15
Labor market information needs of youth	.68	2.87	2.17	2.17
Communication and coordination	.00	.63	.25	.25
Administration and management	.09	.56	.69	.69
TOTALS:	6.39	11.60	9.99	9.99

Note: FY 1980 and FY 1981 budgets are preliminary estimates based on an assumed level of funding in those years of $10 million.

No less than 20 sections of the Education Amendments of 1976 for Vocational Education mandate direct cooperation between Vocational Education and training programs under CETA. In the areas of information and data gathering (sec. 161) (a)(2) - 16 (b)(2)) occupational education data reporting and accounting systems at the national, State, and local levels must be compatible with information systems established under CETA. In the area of planning, States are required to assure the U.S. Commissioner of Education that one of the elements of the local application for vocational education funds will be a description of how their activities relate to the activities of the local CETA prime sponsor (P.L. 94-482, sec. 106 (a)(4)(c)). Also, the 5-year State plan for vocational education must set out criteria which have been developed for coordinating manpower training programs conducted by prime sponsors with vocational education programs (sec. 107 (b)(5)).

The latest vocational education and manpower legislative amendments mandate the exchange of advisory committee representatives between the programs and the active involvement of those representatives in the work of advisory committees and planning committees of both programs at every level.

In response to the high rate of youth unemployment, Congress amended CETA in a manner designed to facilitate an active engagement of the educational community with the public and private sector of the economy.

With the passage of the Youth Employment and Demonstration Project Act of 1977 (YEDPA), the Office of Occupational Planning immediately began working with interagency and intra-agency task forces in the development of rules and regulations and a planning modality for the smooth implementation of the Youth Act.

The activities of the Office of Occupational Planning (OOP) also resulted in the development of essential information components for prime sponsors and Local Education Agencies (LEAs) relative to the Youth Employment and Demonstration Project Act of 1977. This office specifically assisted in the development of a Guide to Agreements Between CETA Prime Sponsors and Local Education Agencies, module agreements, the evaluation criteria, definition of terms, assurances, etc.

Additionally, the Office of Occupational Planning worked with the Department of Labor in the development of five jointly-sponsored workshops designed specifically to link prime sponsors and Local Education Agencies together in resolving many of the issues relative to YEDPA that required a 22 percent setaside for LEAs.

A study on the attitudes of Black leaders, relative to Black youth entering and completing vocational education programs were recently completed. The study was designed to solicit specific suggestions and recommendations about how to improve vocational education programs and how to increase the participation and support of Black leaders for vocational education programs.

The Office of Occupational Planning developed a joint inter-agency agreement between the Office of Education, Bureau of Occupational and Adult Education, and the Employment and Training Administration, Office of Youth Programs. The study was designed to assess the attitudes of Black leaders toward Black youths entering and completing CETA-YDEPA programs.

The purposes of the study, derived from the legislation and current program needs, are to: (1) determine the opinions and recommendations of Black leaders about the indicated programs, and the role of these programs in meeting the education/training/employment needs of Black youth; (2) provide data to administrators of the designated programs for their use in program development, implementation, and coordination.

Coordination Mandated by CETA (Sec. 112)

The Comprehensive Employment and Training Act of 1973 (CETA) (title I, section 112) mandates the " . . . the Secretary of Labor shall make grants to Governors to provide financial assistance through State vocational education boards, to provide needed vocational education services in areas served by prime sponsors."

During 1978, an assessment was made of the services provided to CETA clients by the State Departments of Vocational Education. The total amount of funds obligated was $100,513,836.

Expenditures for the last 3 fiscal years show no significant difference in percentage distribution of funds for various categories:

	1976	1977	1978
Administration	14.5%	15.5%	14.0%
Training	72.0%	70.5%	72.6%
Allowances	4.5%	7.6%	7.4%
Other services	7.5%	6.4%	6.0%

Under sec. 112, over 141,300 training slots were made available during fiscal year 1978 at an approximate total cost of $711 per slot (this includes administration, allowances, and other services).

The training cost alone was $514 per slot.

Twenty-six out of 46 States did not use section 112 monies for allowances.

Five percent funds are funds made available to the Governor of each State under section 112 of CETA for supplemental vocational education assistance to CETA participants. Four percent funds are funds made available to the Governor of each State to provide coordination of all CETA programs within the State. The following are examples of how some States are using these 5 percent and 4 percent funds:

- In Nebraska a survival skills program with counseling approach is being developed and field tested using 5 percent and 4 percent funds.

- In North Dakota there is the linkage of 5 percent monies with STIP (Skill Training Improvement Program) to start a heavy equipment program for energy industries.
- Missouri has a multi coordinated and funded welding project involving public and private funds for construction of a nuclear power plant.
- Iowa has established a solar maintenance and installation program.
- Many States including Connecticut, Massachusetts, Washington, and Wisconsin reported training women for non-traditional jobs.
- Montana has a Mobile World of Work program in rural areas.
- Training for self-employment in soil conservation and irrigation water management is going on in New Mexico.
- Massachusetts boasts a unique deafness interpreter training program.
- Louisiana has implemented a displaced homemaker program.

The types of educational technical assistance provided to prime sponsors by State Departments of Education include:

curriculum development,
material acquisition and dissemination,
program planning and design,
monitoring and evaluation,
inservice training,
audio-visual development,
development of reporting manuals,
assistance in providing linkages with other manpower programs.

The following agencies and institutions provide vocational training programs under section 112:

secondary and postsecondary vocational schools,
skills centers,
private schools and institutions,
private technical institutions,
community and junior colleges,
Opportunities Industrialization Centers (OIC),
Services, Employment and Redevelopment Program (SER),
universities and colleges,
comprehensive high schools,
health care institutions,
private employers.

States have made the following recommendations for section 112 Administration:

- Provide S & E funds directly to State Departments of Vocational Education for technical assistance for prime sponsors.
- Eliminate the numerous set-asides which require separate projects, budgets, reporting requirements, etc.
- Continue efforts to eliminate program duplication.

CETA legislation (P.L. 95-524, sec. 103 (a)(7)) encourages prime sponsors to use services and facilities available from Federal, State, and local agencies, skill centers, local education agencies and postsecondary training and educational institutions. During fiscal year 1978, prime sponsors and local education agencies have cooperated in order to meet the needs of their disadvantaged clients especially in the areas of vocational skills training and basic education.

The following are examples of cooperation between vocational education and prime sponsors:

In Arkansas, "Phase 36" is designed as a co-op program for high school dropouts. When high school dropouts enter the co-op program, they initially go through the Career Awareness Laboratory (CAL), which focuses on the different aspects of the participants unique personality, such as their interests, values, lifestyles, which are related to the participants' needs. Upon completion of the 36-hour CAL program, the participants receive employability skills training, and then are either placed on a job or allowed to shadow employees in certain occupations of their choice until a satisfactory career area is found. After placement, the participants meet in small groups for one-half day per week to receive related training until the co-op coordinator, the employer, and the participants feel they are successful on the job. In addition, the participants are encouraged to enroll in a program of General Education Development (GED) and work toward completion of a high school equivalency diploma.

The "Phase 36" program began with eight pilot projects in July of 1977; in January of 1978 it was expanded to include seven more programs. During the past year, a total of 405 high school dropouts have participated in the program. Over 70 percent of the participants had successful experiences as a result of the program such as placement in non subsidized co-op jobs, completing the GED, re-entering high school, or entering postsecondary training.

A cooperative summer youth program is made available to CETA summer youth workers by the employability skills instructors located at various secondary and postsecondary vocational-technical schools throughout Arkansas. Working cooperatively, the CETA program operators, summer youth counselors, and employability skills instructors arrange a schedule whereby a maximum number of CETA summer youth workers can participate. The educational program consists of training through the utilization of mobile Career Awareness Laboratories (CAL), employability skills training, occupational awareness, and labor market information. The program may also offer individualized development of student learning plans which can be of value to the student in determining long range educational and vocational objectives. The summer program operates for 10 weeks, and the instructional program ranges from 10 to 25 hours of instruction per participant, depending on the need and arrangement of schedule toward serving a maximum number of participants. By offering some educational benefits to the CETA summer youth workers, a more complete program is afforded participants. Work experience combined with educational activities enhance the opportunity for young persons to become more productive and satisfied citizens of their State or community.

In California, many CETA participants' training is funded by local and State funds. The title I prime sponsor pays only excess costs. This is also true in the use of the Governor's Special Grant/Vocational Education fund. Examples of this arrangement are:

At Allen Hancock College local funds support the training. CETA pays only for books and a minor fee. Training is on an individual referral basis.

Simi Adult School has the same arrangement for individual referrals, with the prime sponsor paying for services of a counselor and books.

Kern High School District provides in-kind services for title III participants without charge. These include facilities, utilities, infant care, A-V equipment, and general supplies.

The Stockton Unified School District provided training for entry level skills for approximately 90 limited-English-speaking individuals (Chinese, Philipino, Mexican-American) in four occupational fields: Business, cosmetology, machine repair, and automotive technology. CETA section 112, through the Manpower Education Unit, provided funding for a reading instructor and bilingual teacher aides who assisted the regular vocational instructors in each of the four occupational areas. Regular school financing (local and State support) was used to finance the vocational education portion of this program.

The Indiana State Board of Vocational and Technical Education has entered into a contract with the Balance of State prime sponsor to fund special class-size projects to areas with specific service needs. This is being done at the secondary and postsecondary levels. Programs such as industrial maintenance, magnetic keyboard operations, stone quarry worker, and upholstery are currently in operation. These efforts are directed toward building training programs where none currently exist. Evaluation has not yet been made since all seven of the programs are still in progress. The clients served are regular CETA title I eligible people with no age restrictions.

The State Board of Vocational and Technical Education is also working with the Indiana Office of Manpower Development and the Indiana Department of Corrections to effect a statewide vocational training system for the inmates. This is to be done in conjunction with subparts II and IV disadvantaged and handicapped monies.

In Massachusetts, Project "PROVE" is a cooperative effort between the Lowell CETA Prime Sponsor and the Greater Lowell Regional Vocational-Technical School (GLRVTS) in which CETA title I-eligible applicants who already have some previous training or experience in a trade are given additional skill training, thus, allowing them to be placed in jobs above the entry level. The participants are integrated into the regular shops at GLRVTS at any of three levels of training -- intermediate, advanced, or very advanced. Training is available in five vocational clusters (business, food services, construction, manufacturing, and home economics), offering career possibilities in 16 trades. Instruction is individualized to best meet the needs of each participant. Skill objectives, activities, resources, and evaluation are built into each LAP (Learning Activity Package). Students are "promoted" to higher skill levels as LAPs are completed.

The Lowell Prime Sponsor supports the program with section 112 funds. Transportation, shop equipment, and other services are provided by GLRVTS. The students are encouraged to take advantage of the full career guidance, vocational counseling, and on-going job development and placement counseling.

Rural Minnesota CEP and the Vocational-Technical Division jointly funded a pre-vocational workshop for 244 individuals in the summer of 1978. Seven area vocational-technical institutes, prime sponsors, and State Department section 112 staff worked together to plan a unique vocational offering to prepare students for full-time postsecondary vocational training. Each school designed the program for student needs in their area.

The State Board of Education provided $46,000 for instructional costs through average daily membership from State funds. The prime sponsor provided $11,000 for tuition, books, and supplies. The majority of trainees were youth who received stipends from title III and adults from title I of CETA. Upon completion, all were enrolled in full vocational programs.

The vocational training ranged from 9 to 21 months, 5 days a week, 6 hours a day. The seven schools offered 100 vocational offerings for the CETA students. Examples of courses are law enforcement, farm equipment mechanic, medical secretary, total energy, avionics, and many other demand occupations. Through section 112, full-time counselors were hired to provide services for CETA students. Tutors are provided where needed.

Placement is provided by the prime sponsor and the school. Financial assistance is also provided by Basic Opportunity Grants, Vocational Rehabilitation, and State tuition subsidy.

This total program is an excellent example of meeting vocational training needs of the unemployed through State and prime sponsor cooperation.

CETA Coordination Unit

In order to effectively facilitate the implementation of the policy for the overall manpower coordination strategy of the Comprehensive Employment and Training Act, the U.S. Office of Education established the CETA Coordination Unit within the Bureau of Occupational and Adult Education.

Since the Department of Health, Education, and Welfare has a significant coordination role to play in the implementation of the act, the CETA Coordination Unit is a focal contact for the coordination of appropriate resources within OE as they relate to CETA efforts.

National Advisory Council On Vocational Education

The National Advisory Council on Vocational Education, established as a result of the 1968 Amendments to the Vocational Education Act of 1963, was further mandated in the 1976 Amendments. The specific functions mandated under these amendments are:

(1) Advise the President, Congress, Secretary, and Commissioner concerning the administration of, preparation of general regulations and budget requests for, and operation of vocational education programs supported with assistance under the act;

(2) Review the administration and operation of vocational education programs under the act, and other pertinent laws affecting vocational education and manpower training (including the effectiveness of such programs in meeting the purposes for which they are established and operated), make recommendations and submit annual reports of findings and recommendations (including recommendations for changes in the provisions of the act and other pertinent laws) to the President, Congress, Secretary, and Commissioner;

(3) Make such other reports or recommendations to the President, Congress, Secretary, Commissioner, or head of any other Federal department or agency as the council may deem desirable;

(4) Identify, after consultation with the National Commission for Manpower Policy, the vocational education and employment and training needs of the Nation and access the extent to which vocational education, employment training, vocational rehabilitation, and other programs under this and related acts represent a consistent, integrated, and coordinated approach to meeting such needs; and comment, at least once annually, on the reports of the National Commission including such comments in one of the reports submitted by the National Advisory Council and in one of the reports submitted by the National Commission pursuant to section 505 of the Comprehensive Employment and Training Act of 1973;

(5) Conduct such studies, hearings, or other activities as it deems necessary to enable it to formulate appropriate recommendations;

(6) Conduct independent evaluations of programs carried out under this act, publishing and distributing the results; and

(7) Provide technical assistance and leadership to State advisory councils established pursuant to section 105, in order to assist them in carrying out their responsibilities under this act.

The council serves the citizens of this country by analyzing and reporting on critical issues facing the American society as they relate to vocational education. By Congressional authority, the council has responsibility for identifying vocational education and employment training needs. It has responsibility for assessing the extent to which the vocational education delivery system is meeting identified National needs. Its role is essential to the continued strength of vocational education delivery systems throughout the country.

The council prepared the following six reports in 1978:

(1) Annual Report of the National Advisory Council on Vocational Education;

(2) Overview - 1977 Reports of the State Advisory Councils on Vocational Education;

(3) Vocational Education Sex Equity Coordinators Survey Results;

(4) Testimony - CETA Reauthorization on Employment Opportunities Committee before the Subcommittee on Education and Labor;

(5) Testimony - CETA Reauthorization before the Subcommittee on Employment, Poverty, and Migration of the Committee on Resources; and
(6) Comments of the NACVE on the Reports of the National Commission for Manpower Policy.

The total budget for the council for FY 1978 was $466,800. In addition to staffing the national office, the council:

(1) Conducted 11 meetings throughout the country,
(2) Participated in the management evaluation reviews for compliance/quality in partnership with the U.S. Office of Education,
(3) Provided technical assistance and liaison to the State Advisory Councils for Vocational Education, and
(4) Conducted an indepth evaluation of the Bureau of Occupational and Adult Education.

The council's independent stature and oversight responsibilities place it in a unique position for gathering data, conducting studies, and recommending programmatic actions to Congress.

As an independent body, the council directly advises the President on the status of vocational education. Its publications and interest areas usually set trends for action by the Congress.

The council consists of 21 members. It contains representation from all geographical areas and segments of society. The council's membership includes females, Blacks, and Mexican-Americans. The following areas of expertise are represented: secondary and elementary education, postsecondary education, adult education, persons of limited-English-speaking ability, minority groups, disadvantaged persons, youths, State/local school boards, new and emerging occupational fields, students, the lay public, and private businesses.

National Institute of Education - Section 523 (b) of the Education Amendments of 1976 charges the National Institute of Education with undertaking a thorough evaluation and study of vocational education programs. This includes programs conducted by the States and programs conducted under the Vocational Education Act of 1963, and other related programs conducted under the Comprehensive Employment Training Act of 1973 and by the State Postsecondary Commissions authorized by the Education Amendments of 1972 over a 4-year period (1978-82). Congress can check via these studies if the Federal vocational education policy and the outcome coincide. An interim report is due in September 1980 and the final report in September 1981 when oversight hearings will be under way.

Funds to carry out the administrative and direct requirements of the provisions of the act shall not exceed $1,000,000 per year for each of the fiscal years prior to Oct. 1, 1979. This amount was provided for FY 1978.

These studies require voluntary participation of State and local agencies, institutions, and officials as well as a sharing of information with the U S Office of Education. Because of the lack of resources to conduct national surveys, a large number of case studies will be used.

Responsibility for the organization and conduct of the study, as well as its staffing, was first assigned to the Institute's Education and Work Group. In December 1977, the Director of the Institute submitted to Congress the mandated plan for the study. After an appropriate review and approval period, as required by law, the plan was implemented and disseminated (2000 copies of the 62-page document were printed in January 1978). During the summer of 1978 a reorganization of NIE was completed and the responsibility for the study transferred to the Educational Policy and Organization Group.

By September 1978 all the members of the staff, except one clerk typist, had been recruited and appointed. A consultant group and technical committee had been appointed, and a liaison committee to other Federal and State agencies established. At the same time, contracts for three major substudies on the four subject areas: (1) the distribution of vocational education funds, (2) compliance with the applicable laws of the United States, (3) means of assessing program quality and effectiveness, and (4) review and evaluation of consumer and homemaking education programs, were negotiated.

These major substudies are:

1. A descriptive Study of the Distribution of Federal, State and Local Education Funds. A 36-month study awarded to the University of California at Berkley;
2. Studies of State and Local Administrative, Compliance, and Evaluation Practices of Vocational Education. A 36-month study conducted by ABT Associates, Inc. Cambridge, Mass.; and
3. A Study of the Responsiveness of the Consumer and Homemaking Education System. A 36-month contract awarded to CRC Education and Human Development, Inc., Belmont, Mass.

Intramural research and extramural studies analyzing the whole spectrum of vocational education will be conducted during the next 3 years.

Program Improvement

The Education Amendments of 1976 authorize a consolidated set of functions that are designed to improve the quality of vocational education. These amendments authorize discretionary funds for applied studies, curriculum development, exemplary activities, dissemination, personnel development, and a National Center for Research in Vocational Education. The legislation also authorizes establishment of a Coordinating Committee on Research in Vocational Education. These authorized functions are administered as a national system that is designed to help the States utilize their Program Improvement and Supportive Service funds to improve the quality of vocational education within the States.

One result of the new legislation is that the Programs of National Significance are now closely woven into the total Vocational Education Amendments as an integral part of the act. These Federally administered programs are designed to be the Federal thrust for the improvement of vocational education. Because these funds are also designed to impact heavily on State program improvement activities, they serve as a catalyst for expenditure of funds given to the States for State and local program improvement.

In 1978, the National System of Program Improvement for Vocational Education consisted of (1) 25 projects of national significance, (2) one national center, (3) six curriculum coordinating centers, (4) 56 exemplary projects, and (5) a national training and personnel development program. Programs and projects within the system are coordinated through the legislated Coordinating Committee on Research in Vocational Education. Information in figure 1 illustrates the congressional intent of each component and graphically indicates these activities as components of a National System for Program Improvement in Vocational Education.

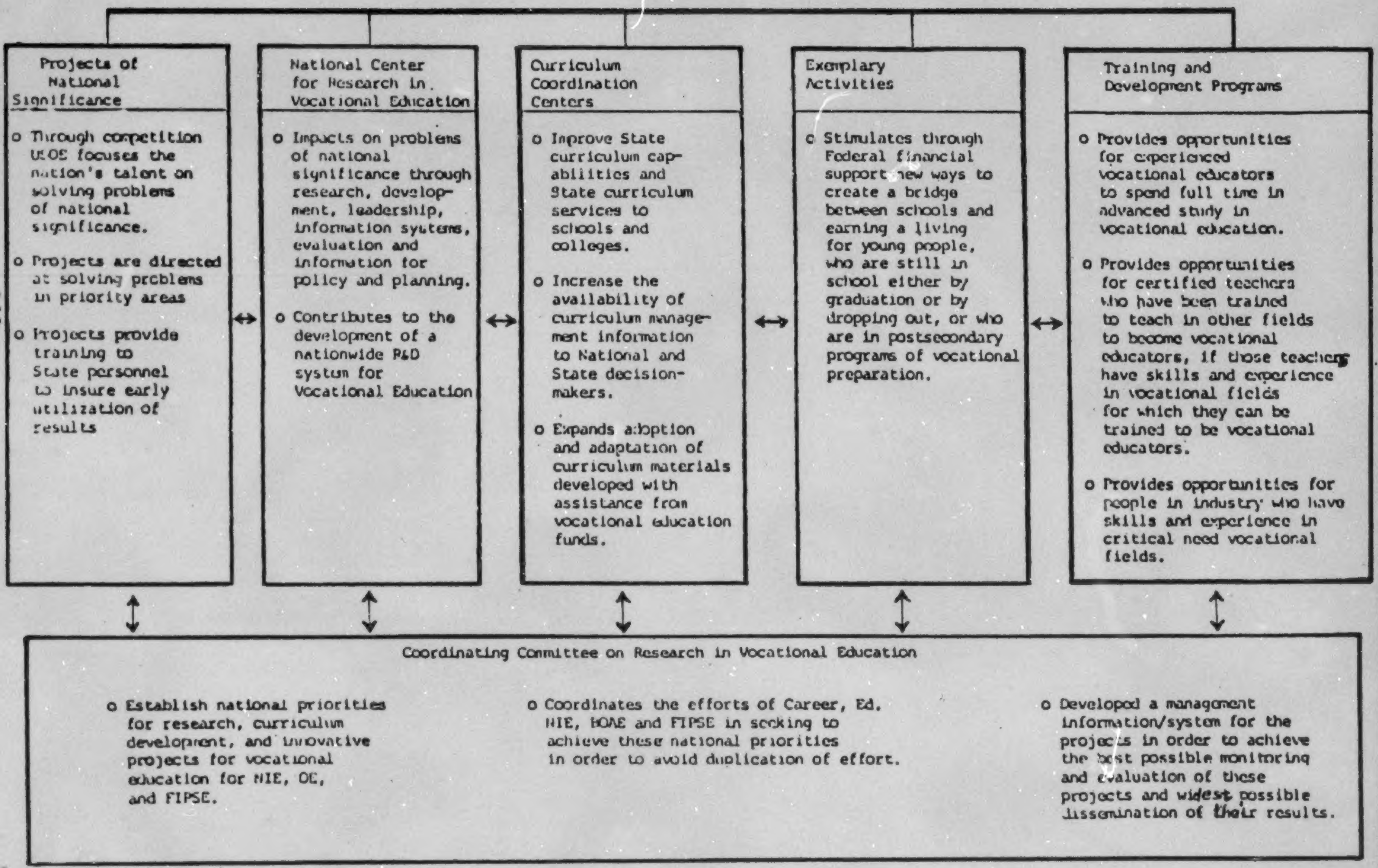
Descriptive Information on 1978 activities for each component of the National System is listed below.

Projects of National Significance. Projects of National Significance are designed to produce information, instructional materials, and recommendations for the improvement of vocational education. These projects help accomplish legislative mandates in priority areas. They are designed to solve problems of national concern and involve the most capable personnel from across the Nation. This program ensures a steady flow of tested materials and information to the States and benefits the States in the administration of their State Program Improvement Funds. Twenty-five projects were funded in 1978. The newly funded projects address several content areas, including vocational education finance and programs for special needs populations including the handicapped, minorities, women, incarcerated persons, and limited-English-speaking persons. The Fiscal Year 1978 expenditures for Projects of National Significance were $5,350,000.

The National Center for Research in Vocational Education: Since its designation as the National Center for Research in Vocational Education at the Ohio State University by the U.S. Office of Education in January 1978, the National Center has worked to make vocational education more responsive to individual and societal needs. It serves as a nationally oriented research and development agency to address problems of national significance in vocational education. Working to build a national research and development system in 1978, the National Center conducted field activities at 51 sites located in 34 States across the country. The National Center maintains a multidisciplinary staff of 328 individuals who since the National Center's inception several years ago have developed 708 official publications and distributed an estimated 500,000 copies. Additionally, the National Center responded to more than 8,400 external information requests during 1978 -- 863 from the Program Information Office, 7,429 from Educational Resources Information Center (ERIC), and 148 from Research Referral Service. Supported with funds from the Education Amendments of 1976, the National Center is mandated to respond to national problems through six main functions: (1) applied research and development, (2) leadership development, (3) information for planning and policy development, (4) evaluation services, (5) clearinghouse, (6) dissemination and utilization. The 1978 expenditures for the National Center were $4,516,415.

Curriculum Coordination Centers: Curriculum Coordination Centers provide information, instructional materials, inservice training, and technical assistance to help States improve their own curriculum development and instructional management practices in vocational and technical education. Services focus on getting adaptation or adoption of federally, State, or locally developed materials in order to conserve resources, and to build State capability in curriculum and materials development. State and local vocational education

Figure 1: NATIONAL SYSTEM OF PROGRAM IMPROVEMENT IN VOCATIONAL EDUCATION



Projects of National Significance

- o Through competition USOE focuses the nation's talent on solving problems of national significance.
- o Projects are directed at solving problems in priority areas
- o Projects provide training to State personnel to insure early utilization of results

National Center for Research in Vocational Education

- o Impacts on problems of national significance through research, development, leadership, information systems, evaluation and information for policy and planning.
- o Contributes to the development of a nationwide R&D system for Vocational Education

Curriculum Coordination Centers

- o Improve State curriculum capabilities and State curriculum services to schools and colleges.
- o Increase the availability of curriculum management information to National and State decision-makers.
- o Expands adoption and adaptation of curriculum materials developed with assistance from vocational education funds.

Exemplary Activities

- o Stimulates through Federal financial support new ways to create a bridge between schools and earning a living for young people, who are still in school either by graduation or by dropping out, or who are in postsecondary programs of vocational preparation.

Training and Development Programs

- o Provides opportunities for experienced vocational educators to spend full time in advanced study in vocational education.
- o Provides opportunities for certified teachers who have been trained to teach in other fields to become vocational educators, if those teachers have skills and experience in vocational fields for which they can be trained to be vocational educators.
- o Provides opportunities for people in industry who have skills and experience in critical need vocational fields.

Coordinating Committee on Research in Vocational Education

- o Establish national priorities for research, curriculum development, and innovative projects for vocational education for NIE, OE, and FIPSE.
- o Coordinates the efforts of Career, Ed. NIE, BOAE and FIPSE in seeking to achieve these national priorities in order to avoid duplication of effort.
- o Developed a management information/system for the projects in order to achieve the best possible monitoring and evaluation of these projects and widest possible dissemination of their results.

agencies are served by State-appointed liaison representatives to six regionally located Curriculum Corrdination Centers. Among the functions performed by the centers are: the provision of library, microfiche, and national search services; interstate curriculum planning sessions; inservice training in developing, selecting, and using existing materials; developing newsletters and disseminating informational materials such as catalogs and brochures; providing workshops and consultant assistance for State curriculum and program leaders; and the coordination of intra-and inter- State curriculum activities. The fiscal year budget for Curriculum Coordination Centers was $395,000. The directors of these centers form a National Council for the National Network for Curriculum Coordination in Vocational/Technical Education.

Exemplary Activities: In 1978, a determination was made for the continuation funding of 55 "Experience Based Model of Career Education" (EBCE) projects. This included the third and final year of funding for 45 projects and the second year of funding for 10 projects. The purpose of EBCE is to bridge the gap between study and experience, and between the classroom and the community. The aim of EBCE is not to replace the classroom but to extend it into all phases of our existance -- social, academic, personal, occupational and to bring learning, living, and working together. EBCE is an attempt to take the subject matter that students normally study, add many new ingredients (about people, jobs, self, and the way communities work) and let high school students learn about them out in the community, through direct experience with adults exploring various occupational choices. In the process, students obtain academic credit, explore the real dimensions of many careers, learn much about who they are and what they want to become, and master some of the skills they will need to negotiate successfully in the world of adult living in America today. A total of 16,750 persons were projected to be served by the 55 EBCE projects during 1978. In actuality, a total of 16,328 students were served for a success percentage of 97.48. In 1978, 55 exemplary projects, located in 45 States and 3 territories, were funded for a total of $7,641,341.

Training and Personnel Development: There are two programs concerned with personnel development: (1) the Graduate Leadership Development Program provides opportunities for experienced vocational educators to study full time in an advanced study program for up to 3 years; and (2) the Teacher Certification Fellowship Program provides opportunities for unemployed, previously certified teachers and persons from business, industry, and agriculture to seek certification in vocational instructional areas in which the Commissioner has identified a need. In the Leadership Development Program, awards are made to selected individuals to attend an approved institution of their choice. In 1978, 155 individuals attended 18 of the 40 approved institutions. In the Certification Program, fellowships were awarded to 189 individuals at the 69 institutions which had endorsed their applications. The expenditures for Fiscal Year 1978 were $3,793,444.

Guidance: The Education Amendments of 1976, sec. 134 (a) of P.L. 94-482, and other recent, new, and proposed legislation at both Federal and State levels emphasize the nationwide need to make career guidance programs, services, and activities both more accessible and more effective in meeting the career development, vocational education, and employment needs of persons of all ages in all communities. The legislation also places particular emphasis on the vocational needs of learners who are disadvantaged, minority, handicapped, and/or female.

To facilitate national improvement of comprehensive unified programs of career guidance in accordance with the Education Amendments of 1976 and related legislation affecting guidance programming and delivery, the Bureau of Occupational and Adult Education is currently supporting a major initial project entitled, "Legislative Provisions for the Improvement of Guidance Programs and Personnel Development." This project will first identify and interrelate (a) significant legislative provisions, (b) selected available resource materials and (c) the competencies required of relevant kinds of personnel for planning, managing, operating and evaluating unified programming for delivery of career guidance. With these data bases accomplished, the project will then (a) produce a handbook and related field-testing training materials, and (b) use these products to provide training for more than 900 varied personnel throughout the nation. These personnel will then be capable, as teams, of training others at the local level in the use of the handbook and related materials for improvement of local comprehensive guidance programs.

The Federal legislation to be investigated includes titles, I, II, and III of the Education Amendments of 1976 (P.L. 94-482): the Youth Employment and Demonstration Projects Act (P.L. 95-93): the Career Education Incentive Act (P.L. 95-297): and the Elementary and Secondary Education Act of 1965, as amended. Selected State legislation will be investigated for illustrative or exemplary provisions in terms of promise for nationally significant improvement of career guidance, and in terms of focusing attention on the interplay of Federal and State legislation in planning, implementing, operating, and accounting for comprehensive unified programs of career guidance.

In 1975, the Bureau of Occupational and Adult Education determined that rural and small schools needed concentrated, special assistance in progressing to more systematically planned career guidance programs.

Concluded in 1978 was a series of Bureau of Occupational and Adult Education grant projects undertaken to focus on the guidance, counseling, and placement needs of individuals in the Nation's 7,600 rural and small communities. In consortium and subcontract arrangements, the series involved the National Center for Research in Vocational Education, the Wisconsin Vocational Studies Center, the Northern Michigan University Studies Center, the Far West Laboratory, New Mexico State University, the American Vocational Association, the American Personnel and Guidance Association, the American Institutes for Research, and the American Association of School Administrators. Project advisory committees have involved representatives of many other interests, including national industry, business and labor. Other project working relationships involved the ERIC Centers for Counseling and Personnel Services, Career Education, Rural Education and Small Schools, and the Department of Labor's Employment and Training Administration.

Major outcomes of this project series, coordinated by the NCRVE, include:

- o Rural American Series and supplementary materials (a total of 24 program guides);
- o Increasing Guidance Effectiveness which describes over 200 cooperative arrangements between schools and business, industry, and labor which assist youth to improve their career development: and

- National Communication Network operated for 15 months to receive and respond to nearly 2,000 toll-free phone and letter inquiries about current career guidance programs and resource materials.

The NCRVE field-tested the Rural American Series to determine the potential impact of planning and implementation techniques and materials. Nine post-secondary and nine secondary schools were involved in the test. Through this contract at least 50,000 students have received increased skills and knowledge for transition from school to work, 200 community leaders have increased their involvement in program improvement, and 2,500 guidance providers are more competent in their attempts to improve their guidance programs. The States in the field tests were Washington, Kansas, Wisconsin, Michigan, Ohio, Texas, New Mexico, Maine, and Kentucky.

Additional measures of impact of this project series include:

1. Sale by the NCRVE of 25,882 volumes in the "Rural American Series" within 15 months, 4,026 copies of "Career Resource Centers" within 12 months, and 158 copies of Increasing Guidance Effectiveness in 4 months.

2. Follow through by the NCRVE by (1) developing a Facilitator's Guide for Training in the Use of the Rural American Series and by (2) achieving 36 technical assistance contracts. The Facilitator's Guide provides a workshop framework for assisting personnel in learning how to plan and use the "Rural American Series" materials. Under the center's 36 technical assistance contracts, 3,405 individuals have been trained in this manner (125 at the national level, 2,500 at the State level, 450 at the intermediate level, and 250 at the local level, plus 80 CETA personnel). The contracts have been with 23 State Departments of Education, five universities, six intermediate agencies, and two territories, America Samoa and Puerto Rico. Through the technical assistance contracts, States such as Washington, Florida, Kansas, Iowa, and America Samoa have adopted the series on a statewide basis.

Scheduled to be completed in the spring of 1977 was another major series of grant projects called the National Consortium on Competency-Based Staff Development in Comprehensive Career Guidance. Since initial Bureau funding in July 1975, the American Institutes for Research (Washington, D.C. and Palo Alto, Calif.) has coordinated this National consortium. In addition to AIR, current key participants are the California State University at Long Beach and the Califronia State Department of Education, the University of Florida and the Florida State Department of Education, the University of Michigan and the Michigan Department of Education, the State of Washington, Superintendent of Public Instruction and the University of Washington.

The aim of this sustained, coordinated consortium of projects is to make significant changes in pre and inservice staff development for personnel establishing comprehensive programs of career guidance, counseling, placement, follow through and followup. The impact is designed to be in the direction of a better integration of pre and inservice staff development than institutions have accomplished to date.

Working as regional centers for training, product development, product field-testing, demonstration, dissemination, and installation, the Consortium partners have been conducting more diverse and development activities and attempting to make greater regional impact than would be possible in any single-setting project.

Print products will include over 50 field-tested and revised staff development modules "packages" and a catalog titled, Competency-Based Education for Guidance and Counseling Personnel: A Catalog of Programs and Competencies. In addition to impacts resulting from these major tasks being carried out directly by the regional centers, the results and products of this consortium effort are already being used as a major resource by the FY 78 funded project first described above - "Legislative Provisions for the Improvement of Guidance Programs and Personnel Development".

Coordinating Committee on Research in Vocational Education: In accordance with section 171 of the Education Amendments of 1976, the Coordinating Committee on Research in Vocational Education (CCRVE) was established. Representatives from the National Institute of Education, the Bureau of Occupational and Adult Education, the Fund for the Improvement of Postsecondary Education, and the Office of Career Education meet bimonthly. Coordination of program efforts has been achieved and duplication of efforts have been reduced by the committee. This goal was achieved by the sharing of the program information, publications, and releases among the members of the committee. Projects that have been planned by some of the programs have been cancelled when the appropriate personnel were made aware of existing efforts. This is attributable to the exchange of information which took place at the committee meetings. In addition, program briefings were arranged for the staff of the various offices to increase the awareness of the program efforts of other offices.

An information system has been developed which includes a publication entitled Projects in Progress. Data is collected, stored, and used by this committee and by program personnel who initiate and monitor vocational education and related activities. This system contains data about all current vocational education projects which are supported by programs represented on the Coordinating Committee on Research in Vocational Education. This system allows close monitoring and evaluation of each project, assists in the widest possible dissemination of project results and products, and provides a basis for more systematic planning.

National Program Impact: Programs of National Significance made possible through the 5 percent set-aside provide essential research, development, training, planning information, and evaluation activities that are relevant and useful to large numbers of States. Table 29 displays impact information about Programs of National Significance and those National priority areas of concern to the administration and Congress. The table demonstrates the wide range of impact on priorities.

In addition to the applied studies, curriculum development, and exemplary components, dissemination and utilization play an integral part in the work of the National System for Program Improvement. A great deal of emphasis is placed on the dissemination and utilization requirements of projects and activities. Although not depicted on table 29, virtually every project and activity stresses dissemination.

Additionally, these projects will provide workshops and orientation for State personnel regarding the results and products that emenated from those

TABLE 29: ANALYSIS OF LEGISLATIVE FUNCTIONS AND PRIORITY AREAS

PRIORITY AREAS	LEGISLATIVE FUNCTIONS		
	APPLIED STUDIES	CURRICULUM DEVELOPMENT	EXEMPLARY
CETA	3		
Inner cities and rural isolated areas	3		
Accessibility	2	7	9
Extend and improve planning accountability and data systems	17	2	3
Effective guidance	2	2	2
Increase vocational equity	3	1	4
Handicapped and disadvantaged	13	1	2
Improve relationships between general education and vocational education	2	2	1

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activities.

A summary of impact on each of the eight national priority areas is:

1. Improving the Connection Between CETA and Vocational Education Programs

   These activities provide vocational education leaders with materials, models, and training concerning effective ways of linking Comprehensive Employment and Training Act supported programs and vocational education supported programs.

2. Improving Vocational Education Programs for Youth in Inner Cities and Rural Isolated Areas

   These activities provide alternative methods of providing vocational education for inner city and rural youth. Special emphasis is given to providing vocational education opportunities for delinquent and out-of-school youths.

3. Increasing the Availability of Vocational Education Programs

   These activities emphasize the development of curriculum and instructional materials in emerging occupational areas to State and local personnel. Also, a strong emphasis is placed on providing materials and training State personnel about program improvement strategies in individual occupational areas. This thrust is focused on training State personnel to utilize available resources, materials, and strategies for improving vocational education instruction at local levels.

4. Planning, Accountability, and Data Systems

   These activities provide data for policy development for the future of vocational education, and for developing better data systems which will show the trend of vocational education in relation to socio-economic and macro-economic development for the Nation.

5. Increasing the Effectiveness of Guidance for Vocations

   These activities train teams of State and local personnel to utilize data from the State Occupational Information Coordinating Committees and other sources in order to assist students in making more informed occupational choices. This effort effects every State and outlying area by improving the utilization of the 20 percent set-aside for guidance under the Program Improvement and Supportive Services portion of the Education Amendments of 1976.

6. Improving Vocational Equity

   These activities develop materials for use by State personnel in each of the major occupational areas for training local administrators, supervisors, and instructional personnel regarding the needs of women and strategies for better serving their needs in each of the major occupational areas.

7. Improving Vocational Education Programs for Handicapped and Disadvantaged Learners

These activities produce special instructional materials in the various occupational areas for learners with specific handicaps and for learners with specific disadvantages.

8. Improving Basic Skills Development Through Vocational Education

These activities improve the basic skills of those entering vocational education so they could benefit from vocational education instruction. Instructional materials were developed for the various occupational areas.

Summary: The National System of Program Improvement is an effective and appropriate strategy for increased planning and leadership activities at the Federal, State, and local levels. These programs influence the quality and character of the Federal program dollars by impacting on the 8.5 State and local dollars which overmatch each Federal dollar. The system also causes Federal, State, and local resources to be focused on such problems as access, equality, and responsiveness of the vocational education system toward meeting the needs of special populations including the handicapped, bilingual, and disadvantaged. Essential research, development, training, planning information, and evaluation activities are thus provided to large numbers of States in an efficient and cost effective manner.

DOD Linkage

Over the past 5 years, the U.S. Office of Education, the Department of Defense, and the U.S. Coast Guard have been joined together by formal agreement to improve the availability of curriculum and instructional materials produced by the armed services to civilian secondary and postsecondary vocational education programs.

A model for facilitating the civilian utilization of military materials was designed, and in 1978 a project was conducted to test the effectiveness and efficiency of this system for identifying, selecting, and disseminating relevant military-developed materials to schools and colleges in the Northwest. A 250-page loose-leaf catalog which described 75 residential courses and 50 correspondence courses was distributed to vocational and technical educators in four pilot States, Alaska, Idaho, Oregon, and Washington. The distribution of 268 catalogs resulted in 97 orders for materials.

The development and testing of this model system was carried out by Ohio State University. Under provisions of subpart 2, Programs of National Significance, Education Amendments of 1976, a National Center for Research in Vocational Education was authorized to serve as a clearinghouse for information on contracts. This center, located at Ohio State University, is implementing incrementally the results and recommendations of the four-State pilot test. The center serves as the USOE agent for the acquisition and distribution of Department of Defense materials that are requested by vocational and technical educators nationwide.

Added impetus to this interagency linkage was provided by section 171 (b)(3) of the legislation which directed that contracts should be made to convert to civilian use armed services materials involving job preparation. The National Center identifies such course materials especially in new and emerging technologies which have high potential for supplying civilian training needs. USOE determines courses to be converted and prepares requests for proposals. The first conversion contract was made in 1978 and will result in strengthened curricula for training dental assistants and physician assistants in civilian technician-level programs.

Bilingual Vocational Training

Support for bilingual vocational training was first authorized under the Education Amendments of 1974 which added Part J to the Vocational Education Act of 1963. The Commissioner was authorized to support projects which would provide bilingual vocational training to persons of limited-English-speaking ability (LESA) who were unemployed or underemployed and were unable to benefit from English-language vocational training because of their language handicap.

The 1975 Current Population Survey of the Bureau of the Census estimated that there were up to 12,715,000 persons 14 years or older with limited-English-speaking ability. A large proportion of these persons need training and/or assistance to improve their employability or to upgrade their skills. More importantly, however, a Bureau of the Census study in 1976 revealed that LESA populations have an unemployment rate which is approximately 3 percent greater that that of the English-speaking population. For the largest population of limited-English-speaking ability (Spanish-speaking) the rate is approximately 5 percent greater than that of the English-speaking population.

The Education Amendments of 1976 expanded the authority to include not only bilingual vocational training but also bilingual vocational instructor training, and the development of bilingual vocational instructional materials, methods, and techniques. The appropriation of $2.8 million was distributed among the three programs. Sixty-five percent ($1,820,000) of the appropriation is allocated for bilingual vocational training projects, 25 percent ($700,000) of the appropriation is allocated for bilingual vocational instructor training projects, and 10 percent ($280,000), for the development of materials.

The purpose of the bilingual vocational training program is to prepare persons of limited-English-speaking ability to perform adequately in a work environment which requires English language skills and to fill the critical need for more and better trained persons in occupational categories vital to both the people and the economy. Trainees acquire both vocational skills and English to enable them to compete in the job market. Seventy-seven 1-year projects have been supported since the program began in 1975. Twelve projects funded with fiscal year 1978 monies served Spanish, Chinese, and Indian speaking adults.

A bilingual vocational training project at the University of California at Los Angeles has as its purpose the training of persons of limited-English-speaking ability to become dental assistants. The trainees work in dental offices and not only assist the dentist but also serve as a bridge between the English-speaking dentist and the non-English-speaking patient.

China Institute in America has trained Chinese-speaking persons in Chinese cuisine. Of the almost 400 persons who have been trained in the project, not a single person has been unemployed or on welfare. Trainees have been placed at an average yearly salary of $9,000.

The purpose of the bilingual vocational instructor training is to meet the critical shortage of instructors possessing both the job knowledge and skills and the dual language capabilities required for adequate instruction of persons handicapped by their limited-English-speaking ability. Three projects supported with FY 1978 funds are training 120 teachers. One project for the development of materials is developing a monograph for planners, directors, and evaluators of bilingual vocational training projects. The results of a current longitudinal study assessing the impact of this program as well as other efforts concerned with the needs of the bilingual population will be available in FY 1981.

Emergency Assistance for Remodeling and Renovation of Vocational Education Facilities

The attitude of Congress regarding the use of appropriated funds for renovation of vocational education facilities and the replacement of obsolete equipment has changed dramatically over the years. The Smith Hughes Act of 1917 (P.L. 64-347) specified that in order to receive the benefits of Federal appropriations for salaries, the individual States were required to provide and maintain both plant and equipment. No portion of any monies appropriated could be applied, directly or indirectly, to the purchase, erection, preservation, or repair of any building(s), or equipment. The passing of the George-Barden Act (P.L. 79-586) in 1946 signaled the beginning of the concern of Congress for updating facilities and equipment. Under the act's title I, funds were available to assist in the purchase of or rental of equipment and supplies. Title III (added by title VIII of the National Defense Act of 1958, P.L. 85-864) specified that funds could be used for acquisition, maintenance, and repair of instructional equipment. The Vocational Education Act of 1963 started the trend of Congressional concern of providing for the construction of area vocational schools and continued the concern for providing for equipment and operation of both area vocational education facilities and residential vocational schools. The Amendments of 1968 also provided for funds "to pay the Federal share of the cost of planning, constructing and operating residential vocational education facilities." The meaning of "operation" as defined here includes the cost of salaries, equipment, supplies, and materials.

Under the impetus of these two acts, the number of area vocational schools jumped from 405 in 1965 to over 2,600 in 1975. The Education Amendments of 1976 further provided for construction by permitting the States to use funds under their Basic Grants to cover building costs.

Despite these provisions, many of the more than 2,600 area vocational schools built since 1963 have had little equipment replacement since their construction. Since the average life of equipment is 10 years, there is a constant and critical need for repair and replacement. In addition, new legislative requirements, such as those of the Architectural Barriers Act of 1968, necessitate remodeling and/or renovation of facilities to better serve special populations.

In passing P.L. 94-482, the Education Amendments of 1976, Congress made clear that it saw the need for a separate provision designed to remedy these problems. Subpart 4 specifically provides for emergency assistance for the remodeling and renovation of vocational facilities and particularly those in depressed areas with high youth unemployment. It will provide Federal funds for updating facilities and equipment over and above those monies available to the States under the provisions of part A (State Vocational Education Programs) and part B (National Programs) of the 1976 Act and through the Regional Commissions.

Although Congress authorized $25,000,000 to be appropriated in FY 1978, for subpart 4 it did not appear as a line item in the 1977 appropriations (available for use in 1978).

Appalachian Regional Commission Program

The Appalachian Regional Development Act authorizes the Secretary of HEW to make grants for planning, constructing, and operating area vocational schools and education projects which will serve to demonstrate area-wide educational planning, service, and programs, with special emphasis on vocational-technical education, career education, cooperative and recurrent education, and guidance and counseling.

The program operates under an interagency agreement between the Appalachian Regional Commission (ARC) and the U.S. Office of Education (OE) and is administered by OE Federal funds transferred from ARC. Since the program started in 1966, 1,120 construction/equipment projects have been funded, resulting in construction of 655 area vocational school facilities which will serve an estimated 390,000 in-school youths per year when all are completed as well as providing adult evening programs. This concentration on area vocational schools reflects the basic mission of ARC to promote economic development. According to the ARC 1978 Budget Statement, a greater portion of secondary school students in Appalachia participate in occupational vocational education programs than in the Nation as a whole.

During Fiscal Year 1978, ARC transferred $21 million dollars to the Office of Education to fund 136 projects, which combined with $18.2 million of State/local funds provided a total program expenditure of $39.2 million.

Since 1972, when Congress amended the Appalachian Regional Development Act to provide for demonstration projects, the number of this type of project has increased from 30 the first year to 81 in 1978. It appears that this trend will continue, with the majority of construction being for additions or expansion of existing facilities.

APPENDIX A

The following are definitions of some terms frequently used throughout this report:

1. Vocational education program is a planned sequence of courses, services, or activities designed to meet specific occupational objectives. Consumer and homemaking education is included as a program. Responsibility for this planning is carried out at the State or local level.

2. Vocational education program enrollment is defined as an unduplicated count of students who are enrolled at some time during the program year in one or more courses identified by the educational agency as part of a vocational education program. As noted on page 1, some States are not successful in fully unduplicating this count.

3. Vocational education program completer refers to a student who completes a vocational education program as defined by the State or local educational agency and leaves school. In some States this includes "early leavers" who acquired marketable skills and found employment in a field related to their training.

4. Vocational education program placement means a student identified as a completer whom the State or local education agency has found to be employed. This is determined by a follow-up contact made between 4 and 10 months after the program year.

5. Program year means the period from July 1 to June 30 of the following year.

6. Vocational education program expenditures mean the amount of monies which State and local education agencies identify as being spent for the construction, operation, and administration of vocational education programs.

APPENDIX B

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ENROLLMENT IN VOCATIONAL EDUCATION, BY PROGRAM AND LEVEL
PROGRAM YEAR 1978
(July 1, 1977 - June 30, 1978)

Programs	Total	Female	Secondary	Post-secondary	Adult	Cooper-ative
Grand Total (Unduplicated)	16,704,926	8,419,428	10,236,117	2,089,170	4,379,639	580,316
For employment	10,429,827	4,766,802	4,940,997	2,006,964	3,481,866	562,666
Agriculture	1,006,542	173,824	715,272	57,538	233,732	28,610
Distribution	962,009	495,738	397,429	248,109	316,471	193,046
Health	758,808	591,764	131,907	233,279	393,622	23,909
Occupational home ec.	459,590	378,965	252,566	74,228	132,796	39,751
Office	3,312,475	2,506,368	1,934,722	639,863	737,890	132,666
Technical	527,681	93,001	39,273	330,441	157,967	7,754
Trades and industry	3,402,722	527,142	1,469,828	423,506	1,509,388	136,930
Special programs	3,509,351	1,139,720	3,223,774	51,173	234,404	27,393
Guidance	1,508,189	702,036	1,455,126	22,485	30,578	1,634
Remedial	101,904	45,844	48,858	20,042	33,004	365
Industrial arts	1,492,790	256,611	1,479,121	37	13,632	114
Other N.E.C.	406,468	135,229	240,669	8,609	157,190	25,280
Consumer and homemaking	3,659,441	2,946,101	2,795,949	52,340	811,152	1,687

ENROLLMENT IN VOCATIONAL EDUCATION BY PERSONS WITH SPECIAL NEEDS, BY LEVEL
PROGRAM YEAR 1978
(July 1, 1977 - June 30, 1978)

Areas of Special Needs	Total	Female	Secondary	Post-secondary	Adult	Completions
Handicapped	355,269	136,600	257,237	34,989	63,043	8,979
Limited-English-speaking ability (LESA)	87,046	44,389	49,996	19,039	18,001	3,139
Disadvantaged	1,794,631	809,125	1,237,607	215,995	341,029	89,941
Special Programs for disadvantaged section 140 (102(b))	165,022	69,666	79,849	24,845	57,952	0
Work-study	38,611	16,429	30,147	7,670	794	0
Depressed areas	1,753,193	1,289,976	1,286,061	38,811	428,321	0

ENROLLMENT* IN VOCATIONAL EDUCATION, BY RACIAL/ETHNIC GROUPS
PROGRAM YEAR 1978
(July 1, 1977 - June 30, 1978)

	Total	Female	Secondary	Post-secondary	Adult
Grand Total All Enrollment (Unduplicated)	16,262,957	8,206,591	10,037,560	2,082,546	4,142,851
American Indian and Alaskan Native	112,999	55,438	65,838	17,463	29,698
Black, Non-Hispanic	2,425,899	1,260,834	1,739,274	206,113	480,512
Asian and Pacific Islander	199,543	102,532	115,100	37,338	47,105
Hispanic	1,109,169	581,849	757,061	113,475	238,633
White, Non-Hispanic	12,415,347	6,047,842	7,360,287	1,708,157	3,346,903

*Information not available for Maine and Guam. Minnesota reported postsecondary only.

ENROLLMENT AND COMPLETIONS IN VOCATIONAL EDUCATION, BY INSTRUCTIONAL PROGRAM
PROGRAM YEAR 1978

Instructional Code and Title	Total	Female	Percent	Secondary	Post-secondary	Adult	Cooperative	Completions
01. Agriculture Total	1,006,542	173,824	17.2	715,272	57,538	233,732	28,610	181,014
01.0100 Ag. Prod.	528,946	70,841	13.3	341,399	19,452	168,095	9,799	80,459
01.0200 Ag. Supplies/serv.	33,022	5,980	18.1	23,846	4,762	4,414	4,222	9,383
01.0300 Ag. Mechanics	133,576	6,619	4.9	108,634	3,633	21,309	3,231	34,457
01.0400 Ag. Products	12,680	1,973	15.5	8,974	1,218	2,488	1,477	3,481
01.0500 Ag. Ornamental horticul.	130,836	58,879	45.0	83,923	17,450	29,463	3,346	32,765
01.0600 Ag. resources	24,517	5,176	21.1	17,253	4,853	2,411	570	6,923
01.0700 Forestry	22,382	2,964	13.2	17,822	3,344	1,216	622	4,639
01.9900 Other	120,583	21,392	17.7	113,421	2,826	4,336	5,343	8,907
04. Distribution Total	962,009	495,738	51.5	397,429	248,109	316,471	193,046	279,720
04.0100 Advertsng. serv.	17,760	9,176	51.6	5,836	7,844	4,080	1,682	4,243
04.0200 Apparel & acces.	32,012	26,220	81.9	21,273	8,386	2,343	11,995	11,821
04.0300 Automotive	9,050	1,040	11.4	7,010	524	1,516	3,953	3,923
04.0400 Finance and credit	48,745	30,537	62.6	3,206	20,207	25,332	2,243	10,419
04.0500 Floristry	7,767	6,397	82.3	2,246	387	5,134	967	2,267
04.0600 Food distrib.	37,117	17,950	48.3	26,307	2,386	8,424	17,975	18,990
04.0700 Food services	57,277	32,158	56.1	34,493	4,002	18,782	21,276	21,661
04.0800 General merchand.	284,230	158,428	55.7	178,684	43,420	62,126	66,168	108,484
04.0900 Hdwe., bldg., Mtls, etc.	4,837	1,241	25.6	4,324	175	338	2,883	2,527
04.1000 Home furnishings	4,435	2,868	64.6	2,371	858	1,206	1,440	1,724
04.1100 Hotel & lodging	19,276	8,316	43.1	2,540	9,422	7,314	1,695	3,495
04.1200 Industrial mktg.	22,012	7,558	34.3	2,260	14,415	5,337	4,730	3,769
04.1300 Insurance	16,773	6,427	38.3	773	3,305	12,695	454	2,875
04.1400 International trade	1,096	427	38.9	181	156	759	112	337

Instructional Code and Title		Total	Female	Percent	Secondary	Post-secondary	Adult	Cooperative	Completions
04.1500	Personal serv.	19,314	10,328	53.4	7,547	3,679	8,088	4,429	5,421
04.1600	Petroleum	4,318	642	14.8	3,933	200	185	2,563	2,117
04.1700	Real estate	194,365	84,829	43.6	4,287	90,279	99,799	3,063	37,855
04.1800	Rec. & tourism	26,860	17,078	63.5	4,451	11,381	11,028	2,009	6,418
04.1900	Transportation	17,069	6,405	37.5	4,124	7,258	5,687	1,575	4,164
04.2000	Ret. trade, other	23,524	12,332	52.4	15,865	3,239	4,420	8,449	7,879
04.3100	Wholesale, trade, other	4,500	1,699	37.7	3,088	150	1,262	1,847	1,692
04.9900	Other	109,672	53,682	48.9	62,630	16,436	30,606	31,538	17,639
07.	Health Total	758,808	591,764	77.9	131,907	233,279	393,622	23,909	202,061
07.0101	Dental assistant	21,724	20,643	95.0	8,085	6,048	7,591	1,523	8,013
07.0102	Dental hygienist (assoc.)	7,465	7,295	97.7	119	6,852	494	57	2,360
07.0103	Dental lab. tech.	4,185	1,821	43.5	911	2,215	1,059	224	1,234
07.0199	Other dental	1,251	889	71.0	558	66	627	65	516
07.0203	Med. lab. assist.	17,988	14,061	78.1	3,941	10,262	3,785	527	3,894
07.0299	Other med. lab. tech.	5,464	4,275	78.2	546	3,247	1,671	173	1,329
07.0301	Nursing, assoc. degree	115,940	105,073	90.6	572	95,319	20,049	2,213	24,895
07.0302	Prac. (voc) nurs.	94,874	89,309	94.1	8,424	25,496	60,954	994	34,399
07.0303	Nurs. asst. (aide)	117,495	101,016	85.9	34,650	3,527	79,318	4,875	42,325
07.0305	Surgical tech.	3,895	3,332	85.5	212	1,462	2,221	95	1,381
07.0399	Other nursing	49,386	42,847	86.7	5,433	3,483	40,470	1,064	7,003
07.0401	Occupa. therapy	2,531	2,277	89.9	138	1,772	621	38	820
07.0402	Physical therapy	3,310	2,711	81.9	580	2,466	264	188	854
07.0499	Other rehab.	2,819	2,170	76.9	447	1,639	733	236	421
07.0501	Radiologic tech.	10,983	7,571	68.9	301	9,500	1,182	370	3,090
07.0503	Nuclear med. tech.	343	199	58.0	13	329	1	15	88
07.0599	Other radiologic	317	211	66.5	19	217	81	27	51
07.0600	Ophthalmic	2,758	1,293	46.8	124	2,008	626	26	577
07.0700	Environ. health	4,049	2,188	54.0	330	2,870	849	75	230
07.0800	Mental health tech.	14,837	11,430	77.0	504	9,250	5,083	341	2,807
07.0903	Inhal. therpy tech.	14,008	8,289	59.1	343	8,010	5,655	359	3,168
07.0904	Medical assistant	31,973	29,196	91.3	11,841	7,200	12,932	945	10,288
07.0906	Health aide	15,699	13,475	85.8	10,541	1,249	3,909	1,540	5,217
07.0907	Med. emerg. tech.	88,092	26,412	29.9	989	13,017	74,086	492	23,748

Instructional Code and Title		Total	Female	Percent	Secondary	Post-secondary	Adult	Cooperative	Completions
07.0909	Mortuary scien.	1,513	466	30.7	57	1,394	62	15	307
07.9900	Other	125,909	93,315	74.1	42,229	14,381	69,299	7,431	23,046
09.01	Consumer & hmkg. Total	3,659,441	2,946,101	80.5	2,795,949	52,340	811,152	1,687	0
09.0101	Compreh. hmkg.	1,434,941	1,158,267	80.7	1,295,177	8,950	130,814	263	0
09.0102	Child devel.	260,252	221,128	84.9	170,251	4,541	85,460	337	0
09.0103	Clothing & tex.	365,456	341,052	93.3	198,179	6,181	161,096	55	0
09.0104	Consumer ed.	185,805	133,895	72.0	103,171	7,713	74,921	48	0
09.0106	Family rel.	264,117	184,451	69.8	211,124	5,654	47,339	21	0
09.0107	Food & nutri.	427,769	334,667	78.2	302,399	8,100	117,270	318	0
09.0108	Home mgt.	52,682	38,194	72.4	38,923	1,073	12,686	4	0
09.0109	Housing & home furnishing	161,567	137,971	85.3	92,664	2,537	66,366	79	0
09.0199	Other	506,852	396,476	78.2	384,061	7,591	115,200	562	0
09.02	Occup. home ec. Total	459,590	378.965	82.4	252,566	74,228	132,796	39,751	112,680
09.0201	Care & guid. of child.	153,478	140,592	91.6	64,442	51,541	37,495	7,700	36,487
09.0202	Cloth. mgt., prod., serv.	70,807	65,411	92.3	41,791	3,750	25,266	2,980	17,767
09.0203	Food mgt., prod., serv.	151,134	105,289	69.6	102,526	10,230	38,378	19,411	41,578
09.0204	Home furn.. equip. serv.	29,222	24,640	84.3	6,174	4,133	18,915	702	5,243
09.0205	Inst. & home mgt.	17,751	14,330	80.7	7,930	1,364	8,457	2,980	4,686
09.0299	Other	37,198	28,703	77.1	29,703	3,210	4,285	5,978	6,919
14.	Office occup. Total	3,312,475	2,506,368	75.6	1,934,722	639,863	737,890	132,666	728,189
14.0100	Acctg. & comptg.	588,971	389,448	66.1	307,126	151,874	129,971	14,084	119,569
14.0201	Computer & console oper.	50,666	30,265	59.7	18,512	15,776	16,378	997	11,519
14.0203	Programmers	83,479	42,082	50.4	22,489	47,312	13,678	3,060	11,165
14.0299	Other bus., data processing	84,015	52,509	62.4	29,495	27,230	27,290	2,199	22,915
14.0300	Filing, office machines	719,267	593,614	82.5	551,883	44,655	122,729	39,039	174,592
14.0400	Info. communic. occupations	45,400	27,390	60.3	17,035	13,907	14,458	1,479	11,144

Instructional Code and Title		Total	Female	Per-cent	Secondary	Post-secondary	Adult	Coopera-tive	Comple-tions
14.0500	Mtls., support, trans., etc.	4,198	2,032	48.4	2,711	869	618	945	991
14.0600	Personnel, trg., and related	58,717	34,330	58.4	16,928	13,848	27,941	6,571	14,858
14.0700	Steno., secy., and related	700,586	653,369	93.2	389,787	152,182	158,617	37,138	170,167
14.0800	Supervsy., & adm. mgt.	212,792	92,116	43.2	18,264	138,791	55,737	4,101	29,078
14.0900	Typing & rel.	584,247	467,554	80.0	419,273	18,440	146,534	16,300	144,077
14.9900	Other	180,137	121,659	67.5	141,219	14,979	23,939	6,753	18,114
16.	Technical Total	527,681	93,001	17.6	39,273	330,441	157,967	7,754	94,305
16.0101	Aeronaut. tech.	5,591	856	15.3	1,083	3,526	982	57	1,041
16.0103	Architec. tech.	30,660	5,245	17.1	3,228	22,509	4,923	508	4,910
16.0104	Auto. tech.	14,041	588	4.1	1,101	10,760	2,180	329	2,354
16.0105	Chemical tech.	5,492	1,924	35.0	995	3,530	967	127	896
16.0106	Civil tech.	30,100	2,081	6.9	968	14,536	14,596	373	3,701
16.0107	Electrical tech.	25,032	833	3.3	4,120	12,038	8,874	688	2,607
16.0108	Electronic tech.	90,306	6,604	7.3	9,048	58,683	22,575	1,214	17,216
16.0109	Electromchnl. tech.	4,298	253	5.8	342	3,213	743	32	971
16.0110	Environ. cntrl. tech.	8,612	588	6.8	356	4,956	3,300	227	1,639
16.0111	Industrl. tech.	18,056	2,390	13.2	361	10,200	7,495	154	2,183
16.0112	Instrumntn. tech.	3,681	224	6.0	296	2,192	1,193	6	645
16.0113	Mechanical tech.	30,168	3,159	10.4	1,351	22,290	6,527	541	5,173
16.0114	Metlurgical. tech.	1,529	97	6.3	84	1,036	409	4	524
16.0117	Scientific data tech.	15,887	7,348	46.2	3,465	9,858	2,564	395	4,848
16.0601	Commercial pilot trng.	8,874	1,367	15.4	136	6,582	2,156	57	1,325
16.0602	Fire and fire safety tech.	29,147	1,969	6.7	525	11,733	16,889	113	3,615
16.0603	Forestry tech.	3,292	536	16.2	138	2,282	872	110	543
16.0604	Oceangraphc. tech.	2,709	822	30.3	88	2,423	198	40	362
16.0605	Police science	105,457	25,714	24.3	2,665	76,238	26,554	1,312	18,511
16.9901	Air Poll. tech.	183	37	20.2	17	[illegible]	3	11	9
16.9902	Water and waste water tech.	7,254	377	5.1	48	1,645	5,561	38	557
16.9900	Other	87,312	29,989	34.3	8,858	50,048	28,406	1,418	20,675

Instructional Code and Title		Total	Female	Percent	Secondary	Post-secondary	Adult	Cooperative	Completions
17.	T & I Total	3,402,722	527,142	15.4	1,469,828	423,506	1,509,388	136,930	856,388
17.0100	Air condtg.	79,357	1,706	2.1	22,065	14,698	42,594	1,301	18,272
17.0200	Appl. repair	19,758	1,157	5.8	13,344	1,113	5,301	689	5,948
17.0301	Body & fndr.	93,339	2,488	2.6	49,879	10,039	33,421	3,153	29,401
17.0302	Auto. mech.	340,686	17,557	5.1	210,300	34,970	94,416	12,806	99,528
17.0399	Other automotive	108,980	11,678	10.6	59,014	6,733	44,233	4,213	26,782
17.0400	Aviation occup.	36,814	3,641	9.8	9,293	9,582	17,939	419	6,459
17.0500	Blueprnt. rdg.	16,856	2,639	15.6	1,387	1,330	14,139	49	2,892
17.0600	Bus. mch. mnt.	3,962	430	10.8	1,511	577	1,874	163	1,217
17.0700	Comrcl. art occ.	52,966	30,686	57.9	20,854	22,289	9,823	829	10,975
17.0800	Comrcl. fshry. occ.	7,108	731	10.2		368	4,890	94	1,135
17.0900	Comrcl. phtgy.	40,185	14,861	36.9	10,863	14,302	15,020	518	7,960
17.1001	Carpentry	162,313	6,209	3.8	97,359	14,129	50,825	6,355	44,625
17.1002	Electrcty.	95,382	2,643	2.7	36,629	4,938	53,815	1,253	18,373
17.1004	Masonry	44,723	1,065	2.3	26,055	1,395	17,273	921	11,891
17.1007	Plmbg. & pftng.	43,995	686	1.5	9,349	2,184	32,462	960	8,312
17.1099	Othr. constr./mnt.	130,991	7,560	5.7	73,278	12,259	45,454	7,084	32,133
17.1100	Cstdl. serv.	19,895	2,919	14.6	9,875	757	9,263	4,123	5,406
17.1200	Diesel mech.	25,859	589	2.2	7,448	6,382	12,029	939	7,303
17.1300	Drftg. occ.	152,327	21,989	14.4	97,151	24,448	30,728	3,105	33,294
17.1400	Electrl. occ.	118,022	7,262	6.1	30,065	6,709	81,248	1,387	24,349
17.1500	Eltrnc. occ.	146,294	11,504	7.8	72,040	21,299	52,955	2,570	35,217
17.1600	Fabric mnt. serv.	2,865	1,176	41.0	1,679	169	1,017	278	701
17.1700	Mgt. development	76,014	24,814	32.6	1,521	17,328	57,165	1,391	18,650
17.1900	Grphc. arts occ.	108,584	29,218	26.9	77,798	11,485	19,301	3,639	26,920
17.2000	Indstrl. ato. engy.	582	156	26.8	312	152	118	40	114
17.2100	Instr. mnt. & rep.	4,547	764	16.8	929	876	2,742	146	913
17.2200	Maritime occ.	9,096	524	5.7	2,472	999	5,625	336	1,103
17.2302	Machine shop	117,069	5,022	4.2	56,646	10,428	49,995	3,975	32,588
17.2303	Mach. tool oper.	14,232	945	6.6	5,269	3,051	5,912	389	3,437
17.2305	Sheet metal	45,694	1,670	3.6	20,017	1,713	23,964	729	6,571
17.2306	Welding and cutng.	205,486	5,960	2.9	56,759	30,302	118,425	2,321	51,772
17.2307	Tool & die mkg.	8,475	242	2.8	806	778	6,891	98	2,396
17.2399	Other Mtlwrkg. oc.	58,709	3,779	6.4	44,862	2,386	11,461	2,695	17,548
17.2400	Metlrgy. occ.	4,213	403	9.5	1,257	275	2,681	86	400
17.2601	Barbering	4,184	1,545	36.9	1,033	526	2,625	44	1,094
17.2602	Cosmetlgy.	97,947	91,628	93.5	64,613	7,608	25,726	1,485	27,215
17.2699	Other prsnl. serv.	6,114	2,765	45.2	3,878	329	1,907	1,826	2,118
17.2700	Plastics occup.	7,608	1,796	23.6	4,597	404	2,607	333	1,943
17.2801	Firefighter trng.	186,472	10,228	5.4	1,811	12,477	172,184	364	78,542

Instructional Code and Title	Total	Female	Percent	Secondary	Post-secondary	Adult	Cooperative	Completions
17.2802 Law enfcmnt. trng.	104,194	20,612	19.7	3,930	54,768	45,496	895	21,744
17.2899 Other pub. serv.	66,991	27,929	41.6	4,980	14,915	47,096	1,721	7,346
17.2900 Qty. food occ.	54,468	26,867	49.3	29,254	6,211	19,003	9,988	14,389
17.3000 Refrigeration	8,973	195	2.1	2,243	1,620	5,110	171	2,260
17.3100 Small eng. rep.	52,524	2,056	3.9	29,126	2,272	21,126	1,053	13,171
17.3200 Sta. engy. src.	14,021	576	4.1	1,588	221	12,212	65	3,639
17.3300 Textile prod. & fabric	45,642	34,601	75.8	17,149	3,603	24,890	3,143	12,755
17.3400 Leather wrkg.	1,930	474	24.5	1,183	120	627	124	677
17.3500 Upholstering	22,136	10,383	46.9	5,310	1,574	15,252	494	7,198
17.3600 Woodworking occ.	89,620	10,654	11.8	59,336	2,935	27,349	2,302	17,653
17.9900 Other	243,520	60,161	24.7	109,861	22,480	111,179	43,868	50,059
99. Special programs Total	3,509,351	1,139,720	32.4	3,223,774	51,173	234,404	27,393	0
99.0100 Grp. Guid. (re-vocational)	1,508,189	702,036	46.5	1,455,126	22,485	30,578	1,634	0
99.0300 Remedial	101,904	45,844	44.9	48,858	20,042	33,004	365	0
99.0400 Industrl arts	1,492,790	256,611	17.1	1,479,121	37	13,632	114	0
99.0600 Other N.E.C.	406,468	135,229	33.2	240,669	8,609	157,190	25,280	0

NUMBER OF TEACHERS IN VOCATIONAL EDUCATION
PROGRAM YEAR 1978
(July 1, 1977 - June 30, 1978)

Vocational Programs		Total
Grand Total (unduplicated)		354,175
Occupational Programs		311,681
Agriculture	17,668	
Distribution	22,086	
Health	28,569	
Consumer and homemkg.	41,630	
Occ. home economics	12,174	
Office	69,980	
Technical	21,498	
Trades and industry	87,856	
Other	10,220	
Special Programs		43,992
Group guidance	25,211	
Industrial arts	14,941	
Remedial	3,840	
Cooperative	(9,389)	
Disadvantaged	(25,059)	
Handicapped	(11,698)	
Limited-English-Speaking Ability (LESA)	(2,145)	
By Level		
Secondary F.T.E.		154,727.7
Postsecondary F.T.E.		56,057.9
Adult		
Full-time		18,621
Part-time		105,965

VOCATIONAL EDUCATION EXPENDITURES, BY LEGISLATIVE PURPOSES AND SOURCES OF FUNDS
(INCLUDES FY 1978 and FY 1977 CARRYOVER FUNDS)
PROGRAM YEAR 1978 (July 1, 1977 - June 30, 1978)

Vocational Education Act of 1963 as Amended	Total Expenditures	Federal Expenditures	Percent	State/Local Expenditures	Percent
Grand Total*	$ 5,575,769,885	$ 495,405,073	8.8	$ 5,080,364,812	91.2
Section 120	4,879,818,710	376,388,254	7.7	4,503,430,456	92.3
Section 130	239,781,388	64,687,914	27.0	175,093,474	73.0
Section 140	27,971,361	16,987,397	60.7	10,983,964	39.3
Section 150	428,198,426	37,341,508	8.7	390,856,918	91.3

*Financial data includes tentative fiscal reports from some States.

VOCATIONAL EDUCATION ALLOTMENTS AND FEDERAL EXPENDITURES, BY LEGISLATIVE PURPOSE
(FY 1978 FUNDS ONLY)
PROGRAM YEAR 1978 (July 1, 1977 - June 30, 1978)

Vocational Education Act of 1963 as Amended	1978 Federal Allocation	Federal Expenditures and Obligations	Unobligated Balance Carried Over Into FY 1979
Grand Total*	$577,393,865	$375,977,376	$201,089,286
Section 120	413,210,646	278,185,406	135,117,882
Section 130	103,302,662	57,901,532	45,424,290
Section 140	19,962,802	11,583,176	8,384,102
Section 150	40,917,755	28,307,262	12,619,667

*Financial data includes tentative fiscal reports from some States.

VOCATIONAL EDUCATION EXPENDITURES, BY LEGISLATIVE PURPOSE AND SOURCE OF FUNDS
FY 1978 FUNDS ONLY
PROGRAM YEAR 1978 (July 1, 1977 - June 30, 1978)

Vocational Education Act of 1963 as Amended	Total Expenditures	Federal Expenditures	Percent	State/Local Expenditures	Percent
Grand Total*	$ 4,989,706,462	$ 375,977,376	7.5	$ 4,613,729,086	92.5
Section 120	4,345,154,820	278,185,406	6.4	4,066,969,414	93.6
Section 130	231,233,575	57,901,532	25.0	173,332,043	75.0
Section 140	20,011,177	11,583,176	57.9	8,428,001	42.1
Section 150	393,306,890	28,307,262	7.2	364,999,628	92.8

*Financial data includes tentative fiscal reports from some States.

VOCATIONAL EDUCATION EXPENDITURES, BY LEGISLATIVE PURPOSE AND SOURCE OF FUNDS
FY 1977 CARRYOVER FUNDS ONLY
PROGRAM YEAR 1978 (July 1, 1977 - June 30, 1978)

Vocational Education Act of 1963 as Amended	Total Expenditures	Federal Expenditures	Percent	State/Local Expenditures	Percent
Grand Total*	$ 586,063,423	$ 119,427,697	20.4	$ 466,635,726	79.6
Section 120	534,663,890	98,202,848	18.4	436,461,042	81.6
Section 130	8,547,813	6,786,382	79.4	1,761,431	20.6
Section 140	7,960,184	5,404,221	67.9	2,555,963	32.1
Section 150	34,891,536	9,034,246	25.9	25,857,290	74.1

*Financial data includes tentative fiscal reports from some States.

VOCATIONAL EDUCATION EXPENDITURES FOR NATIONAL PRIORITY PURPOSES (SECTION 102(a))*
PROGRAM YEAR 1978

(July 1, 1977 - June 30, 1978)

	Total	Federal	Per-cent	State/Local	Per-cent
Handicapped	$232,613,303	$44,769,374	19.2	$187,843,929	80.8
Disadvantaged	470,045,548	78,081,710	16.6	391,963,838	83.4
Limited English-Speaking Ability (LESA)	19,009,579	2,450,172	12.9	16,559,407	87.1
Postsecondary and adult	1,504,472,583	104,176,339	6.9	1,400,296,244	93.1

*Financial data includes tentative fiscal reports from some States.

VOCATIONAL EDUCATION EXPENDITURES
UNDER SECTIONS OF THE ACT AS AMENDED*
PROGRAM YEAR 1978
FY 1978 AND FY 1977 CARRYOVER FUNDS

Vocational Education Act of 1963 as Amended	Total	Federal	Percent	State/ Local	Percent
Grand Total	$5,575,769,885	$495,405,073	8.9	5,080,364,812	91.1
Section 120:	4,879,818,710	376,388,254	7.7	4,503,430,456	92.3
Voc. programs	3,861,657,446	301,855,877	7.8	3,559,801,569	92.2
Work-study	16,213,332	6,774,321	41.8	9,442,011	58.2
Cooperative	98,182,779	11,194,865	11.4	86,987,914	88.6
Energy	863,521	269,148	31.2	594,373	68.8
Construction	144,963,735	15,223,506	10.5	129,740,229	89.5
Full-time persnl.	1,343,431	1,310,495	97.5	32,936	2.5
Stipends	360,121	360,121	100.0	0	0
Placement services	1,210,666	339,522	28.0	871,144	72.0
Industrial arts	59,875,741	1,071,592	1.8	58,804,149	98.2
Supportive services for women	586,496	74,911	12.8	511,585	87.2
Day-care services	805,160	36,018	4.5	769,142	95.5
Displaced homemakers	2,432,778	718,490	29.5	1,714,288	70.5
Residential schools	3,789,281	894,200	23.6	2,895,081	76.4
Contracted instruc.	3,117,679	203,503	6.5	2,914,176	93.5
State admin.	70,468,790	32,340,093	45.9	38,128,697	54.1
Local admin.	146,385,169	3,667,909	2.5	142,717,260	97.5
Section 130:	239,781,388	64,687,914	27.0	175,093,474	73.0
RCU	36,385,612	20,059,221	55.1	16,326,391	44.9
Guidance/counsel.	130,949,817	23,851,290	18.2	107,098,527	81.8
Preservice/inservice activities	32,719,230	11,469,733	35.1	21,249,497	64.9
Overcoming sex bias	4,370,369	1,184,403	27.1	3,185,966	72.9
State adm.	13,432,503	7,627,857	56.8	5,804,646	43.2
Local adm.	21,923,857	495,410	2.3	21,428,447	97.7
Section 140:	27,971,361	16,987,397	60.7	10,983,964	39.3
Section 150:	428,198,426	37,341,508	8.7	390,856,918	91.3
Non conomically depressed areas educ. progms.	213,161,611	11,880,880	5.6	201,280,731	94.4
Ancillary services	7,626,444	2,495,580	32.7	5,130,864	67.3
Economically depressed areas educ. progms.	201,870,656	20,756,802	10.3	181,113,854	89.7
Ancillary services	5,539,715	2,208,246	39.9	3,331,469	60.1
Section 102(a)**:	2,226,141,013	229,477,595	10.3	1,996,663,418	89.7
Handicapped	232,613,303	44,769,374	19.2	187,843,929	80.8
Disadvantaged	470,045,548	78,081,710	16.6	391,963,838	83.4
LESA	19,009,579	2,450,172	12.9	16,539,407	87.1
Postsec. & adult	1,504,472,583	104,176,339	6.9	1,400,296,244	93.1

*Financial data includes tentative fiscal reports from some States.
**Funds taken from section 120 and 130.

TOTAL ENROLLMENT IN VOCATIONAL EDUCATION FOR THE UNITED STATES AND OUTLYING AREAS, FY 1978

STATE	TOTAL	FEMALE	PCT	SECONDARY	POST-SECONDARY	ADULT	COOPERATIVE	COMPLETIONS	PCT
TOTALS	16,704,926	8,419,428	50.4	10,236,117	2,089,170	4,379,639	580,316	2,449,181	14.6
ALABAMA	219,807	99,056	45.0	153,988	5,551	60,268	10,432	30,658	13.9
ALASKA	42,820	20,392	47.6	27,562	9,864	5,394	1,066	10,661	24.8
ARIZONA	244,912	129,420	52.8	123,764	74,024	47,124	11,617	33,683	13.7
ARKANSAS	146,764	74,089	50.4	100,689	805	45,270	6,591	17,022	11.5
CALIFORNIA	2,094,199	1,084,405	51.7	1,044,444	688,622	361,133	28,072	427,808	20.4
COLORADO	146,067	82,399	56.4	72,896	37,003	36,168	10,656	25,254	17.2
CONNECTICUT	161,932	93,037	57.4	136,802	9,301	15,829	7,432	20,196	12.4
DELAWARE	67,446	29,727	44.0	43,266	8,243	15,937	2,388	10,872	16.1
DISTRICT OF COL.	17,778	9,452	53.1	15,812	438	1,528	1,107	0	0.0
FLORIDA	997,309	516,500	51.7	595,521	61,633	340,155	29,674	77,943	7.8
GEORGIA	411,467	216,623	52.6	381,615	1,335	28,517	18,524	64,140	15.5
HAWAII	63,602	34,745	54.6	41,707	11,749	10,146	1,734	9,286	14.6
IDAHO	51,895	24,466	47.1	34,475	2,007	15,413	1,470	6,735	12.9
ILLINOIS	721,226	346,812	48.0	521,607	150,743	48,876	38,120	138,153	19.1
INDIANA	196,065	97,873	49.9	113,467	23,155	59,443	10,349	25,510	13.0
IOWA	312,805	187,349	59.8	82,437	9,072	221,296	0	29,718	9.5
KANSAS	115,311	62,228	53.9	73,296	5,721	36,294	4,557	31,681	27.4
KENTUCKY	264,480	135,722	51.3	168,990	6,314	89,176	5,309	19,102	7.2
LOUISIANA	259,385	139,467	53.7	204,930	0	54,455	7,412	31,835	12.2
MAINE	54,079	26,216	48.4	28,039	903	25,137	2,540	11,750	21.7
MARYLAND	349,308	177,998	50.9	276,998	39,130	33,180	17,490	27,466	7.8
MASSACHUSETTS	241,822	121,964	50.4	192,968	18,832	30,022	4,446	17,200	7.1
MICHIGAN	379,631	215,625	56.7	220,325	96,931	62,375	25,763	180,339	47.5
MINNESOTA	438,774	199,151	45.3	170,518	46,904	221,352	14,424	66,602	15.1
MISSISSIPPI	185,946	82,102	44.1	118,849	14,497	52,600	3,909	23,247	12.5
MISSOURI	232,187	130,612	56.2	151,073	40,483	40,631	12,743	26,656	11.4
MONTANA	23,885	12,045	50.4	19,976	0	3,909	730	11,434	47.8
NEBRASKA	100,504	57,310	57.0	57,267	15,840	27,397	2,036	18,603	18.5
NEVADA	29,070	12,892	44.3	20,526	3,681	4,863	423	4,791	16.4
NEW HAMPSHIRE	52,910	23,457	44.3	43,778	2,850	6,282	1,102	6,083	11.4
NEW JERSEY	927,157	411,969	44.4	741,966	33,132	152,059	17,060	78,599	8.4
NEW MEXICO	68,577	35,800	52.2	50,230	1,238	17,109	3,383	9,584	13.9
NEW YORK	1,414,971	774,973	54.7	925,929	158,347	330,695	20,332	0	0.0
NORTH CAROLINA	621,236	266,793	42.9	287,878	69,861	263,497	20,736	99,742	16.0
NORTH DAKOTA	59,567	28,084	47.1	43,353	4,778	11,436	2,028	7,939	13.3
OHIO	803,335	407,661	50.7	565,899	17,759	219,677	48,326	220,166	27.4
OKLAHOMA	175,083	71,659	40.9	92,074	9,550	73,459	6,701	62,348	35.6
OREGON	226,878	103,950	45.8	151,835	33,507	41,536	10,525	21,441	9.4
PENNSYLVANIA	434,310	212,079	48.8	257,754	33,851	142,705	19,649	158,337	36.4
RHODE ISLAND	63,924	28,883	45.1	53,235	3,434	7,255	356	12,606	19.7
SOUTH CAROLINA	285,898	131,401	45.9	149,807	38,654	97,437	6,806	28,598	10.0
SOUTH DAKOTA	30,092	17,046	56.6	23,798	0	6,294	2,044	7,127	23.6
TENNESSEE	295,996	133,768	45.1	180,623	24,071	91,302	10,119	65,724	22.2
TEXAS	1,046,710	540,182	51.6	566,411	133,453	346,846	80,181	110,178	10.5
UTAH	82,545	40,523	49.0	70,471	9,082	2,992	3,641	12,886	15.6
VERMONT	25,958	13,192	50.8	17,354	0	8,604	1,000	9,805	37.7
VIRGINIA	430,363	212,673	49.4	271,316	37,892	121,155	19,379	42,012	9.7
WASHINGTON	385,385	197,160	51.1	136,576	45,645	203,164	8,787	40,463	10.4
WEST VIRGINIA	124,613	60,080	48.2	66,174	7,025	51,414	2,571	13,380	10.7
WISCONSIN	342,813	172,922	50.4	143,780	39,644	159,389	5,901	19,935	5.8
WYOMING	34,229	16,113	47.0	33,906	323	0	454	0	0.0
AMERICAN SAMOA	2,093	918	43.8	1,719	276	98	78	203	9.6
N. MARIANAS IS.	2,181	1,207	55.3	2,181	0	0	50	153	7.0
GUAM	0	0	0.0	0	0	0	0	0	0.0
PUERTO RICO	187,434	92,536	49.3	154,471	1,665	31,298	7,896	21,750	11.6
TRUST TERRITORY	4,913	1,951	39.7	4,561	352	0	128	1,340	27.2
VIRGIN ISLANDS	5,279	2,771	52.4	5,231	0	48	0	437	8.2

ENROLLMENT IN VOCATIONAL AGRICULTURE (2 DIGIT TOTAL), BY LEVEL, AND COOPERATIVE PROGRAMS, FY 1978

STATE	TOTAL	FEMALE	PCT	SECONDARY	POST-SECONDARY	ADULT	COOPERATIVE	COMPLETIONS	PCT
TOTALS	1,008,542	173,824	17.2	715,272	57,538	233,732	28,610	181,014	17.9
ALABAMA	36,997	2,692	7.2	35,745	66	1,186	490	4,791	12.9
ALASKA	322	110	34.1	253	58	11	20	59	18.3
ARIZONA	8,912	2,410	27.0	6,372	1,872	668	179	1,573	17.6
ARKANSAS	22,368	1,908	8.5	20,364	0	2,004	749	3,723	16.6
CALIFORNIA	88,950	28,944	32.5	58,127	23,488	7,335	1,113	23,996	26.9
COLORADO	5,218	1,245	23.8	3,678	973	567	997	880	16.8
CONNECTICUT	2,390	838	35.0	2,058	90	242	0	442	18.4
DELAWARE	2,014	462	22.9	1,679	159	176	477	551	27.3
DISJRICT OF COL.	120	2	1.6	68	0	52	15	10	8.3
FLORIDA	38,977	8,350	21.4	31,800	1,119	6,058	1,222	3,720	9.5
GEORGIA	26,385	4,453	16.8	26,223	0	162	0	3,652	13.8
HAWAII	2,610	581	22.2	2,449	146	15	55	620	23.7
IDAHO	6,096	682	11.1	5,251	187	658	0	1,116	18.3
ILLINOIS	33,778	6,282	18.5	28,186	4,302	1,290	2,379	7,161	21.2
INDIANA	24,241	2,856	11.7	20,275	114	3,852	560	4,046	16.6
IOWA	39,751	3,167	7.9	19,001	1,225	19,525	0	6,848	17.2
KANSAS	10,630	1,142	10.7	8,520	622	1,488	204	2,626	24.7
KENTUCKY	22,852	2,346	10.2	17,884	19	4,949	159	2,814	12.3
LOUISIANA	22,853	1,704	7.4	21,791	0	1,062	45	3,564	15.5
MAINE	1,358	203	14.9	1,015	3	340	140	615	45.2
MARYLAND	5,122	1,735	33.8	4,499	329	294	781	1,014	19.7
MASSACHUSETTS	3,865	1,451	37.5	1,972	142	1,751	288	221	5.7
MICHIGAN	15,547	3,931	25.2	14,406	754	387	708	7,768	49.9
MINNESOTA	54,688	10,932	19.9	23,951	2,006	28,731	2,400	11,379	20.8
MISSISSIPPI	23,211	1,942	8.3	15,991	358	6,862	156	[illegible],347	14.4
MISSOURI	22,306	2,949	13.2	17,883	839	3,584	532	2,452	10.9
MONTANA	3,920	361	9.2	3,794	0	126	65	1,779	45.3
NEBRASKA	11,473	1,166	10.1	8,625	974	1,874	196	3,306	28.8
NEVADA	1,179	393	33.3	1,133	46	0	16	170	14.4
NEW HAMPSHIRE	2,125	477	22.4	1,787	338	0	84	565	26.5
NEW.JERSEY	3,883	1,353	34.8	3,086	0	797	142	1,180	30.3
NEW MEXICO	5,762	1,435	24.9	5,617	107	38	133	1,138	19.7
NEW YORK	23,061	7,228	31.3	16,612	3,720	2,729	348	0	0.0
NORTH CAROLINA	32,936	5,587	16.9	25,422	4,021	3,493	561	7,117	21.6
NORTH.DAKOTA	8,617	1,024	11.8	6,574	454	1,589	462	1,348	15.6
OHIO	42,174	8,960	21.2	23,974	1,781	16,419	1,253	19,784	46.9
OKLAHOMA	37,073	3,170	8.5	20,440	271	16,362	375	4,863	13.1
OREGON	7,237	1,933	26.7	5,161	838	1,238	2,061	1,296	17.9
PENNSYLVANIA	22,246	4,553	20.4	16,377	198	5,671	535	6,233	28.0
RHODE ISLAND	1,213	488	40.2	1,213	0	0	0	337	27.7
SOUTH CAROLINA	18,965	3,060	16.1	12,685	601	5,679	37	3,545	18.6
SOUTH DAKOTA	5,715	474	8.2	4,307	0	1,408	568	825	14.4
TENNESSEE	22,097	1,992	9.0	21,038	203	856	137	4,408	19.9
TEXAS	117,529	18,262	15.5	57,631	1,464	58,434	5,901	9,535	8.1
UTAH	5,196	886	17.0	5,074	69	53	171	[illegible]	16.2
VERMONT	1,918	373	19.4	1,698	0	220	84	550	28.6
VIRGINIA	34,028	3,551	10.4	25,845	351	7,832	526	2,324	6.8
WASHINGTON	26,829	7,748	28.8	20,100	2,014	4,715	490	4,003	14.9
WEST VIRGINIA	6,671	664	9.9	5,360	192	1,119	51	701	10.5
WISCONSIN	35,490	4,537	12.7	26,800	921	7,769	742	4,316	12.1
WYOMING	2,474	450	18.1	2,401	73	0	0	0	0.0
AMERICAN SAMOA	15	0	0.0	15	0	0	0	15	100.0
N. MARIANAS IS.	130	80	61.5	130	0	0	0	26	20.0
GUAM	0	0	0.0	0	0	0	0	0	0.0
PUERTO.RICO	4,047	164	4.0	1,985	0	2,062	0	1,540	38.0
TRUST TERRITORY	932	142	15.2	901	31	0	3	259	27.7
VIRGIN ISLANDS	46	0	0.0	46	0	0	0	19	41.3

ENROLLMENT IN DISTRIBUTIVE EDUCATION (2 DIGIT TOTAL), BY LEVEL, AND COOPERATIVE PROGRAM, FY 1978

STATE	TOTAL	FEMALE	PCT	SECONDARY	POST-SECONDARY	ADULT	COOPERATIVE	COMPLETIONS	PCT
TOTALS	962,009	495,738	51.5	397,429	248,109	316,471	193,046	279,720	29.0
ALABAMA	7,261	3,664	50.4	6,621	30	610	3,870	3,115	42.9
ALASKA	3,207	1,366	42.5	1,335	906	964	488	1,235	38.5
ARIZONA	31,420	13,353	42.4	3,747	13,045	14,628	1,956	4,352	13.8
ARKANSAS	5,818	3,394	58.3	3,275	0	2,543	2,646	1,839	31.6
CALIFORNIA	167,038	85,891	51.4	37,102	104,626	25,310	4,876	43,142	25.8
COLORADO	10,431	5,701	54.6	5,206	2,387	2,838	3,814	2,796	26.8
CONNECTICUT	4,185	2,506	59.8	3,716	467	2	4,185	1,545	36.9
DELAWARE	2,054	969	47.1	1,892	0	162	483	646	31.4
DISTRICT OF COL.	895	508	56.7	868	0	27	262	313	34.9
FLORIDA	81,659	44,382	54.3	31,574	8,109	41,976	5,073	15,207	18.6
GEORGIA	7,938	3,620	45.6	6,910	307	721	5,943	4,321	54.4
HAWAII	3,868	2,199	56.8	1,783	1,496	589	752	930	24.0
IDAHO	3,250	1,628	50.0	2,008	136	1,106	1,103	1,100	33.8
ILLINOIS	51,233	24,272	47.3	28,845	16,294	6,094	9,088	15,994	31.2
INDIANA	8,626	4,918	57.0	7,655	594	377	2,893	2,905	33.6
IOWA	8,909	3,993	44.8	2,264	1,393	5,252	0	2,422	27.1
KANSAS	5,324	2,625	49.3	2,390	503	2,431	1,182	3,770	70.8
KENTUCKY	12,233	7,340	60.0	9,452	49	2,732	2,517	2,075	16.9
LOUISIANA	7,920	4,501	56.8	5,362	0	2,558	3,651	2,294	28.9
MAINE	2,085	986	47.2	1,761	85	239	965	1,045	50.1
MARYLAND	7,126	3,641	51.0	3,082	2,929	1,115	3,965	1,915	26.8
MASSACHUSETTS	9,297	5,270	56.6	6,392	1,002	1,903	1,320	1,831	19.6
MICHIGAN	30,562	16,218	53.0	20,131	9,535	896	8,148	17,454	57.1
MINNESOTA	25,604	12,849	50.1	9,571	5,134	10,899	5,116	7,973	31.1
MISSISSIPPI	8,801	5,073	57.6	5,032	863	2,906	2,039	3,388	38.4
MISSOURI	14,479	6,906	47.6	10,392	1,728	2,359	6,714	4,001	27.6
MONTANA	1,278	697	54.5	1,046	0	232	340	1,128	88.2
NEBRASKA	5,254	2,604	49.5	3,414	891	949	1,053	2,139	40.7
NEVADA	720	443	61.5	131	586	3	14	234	32.5
NEW HAMPSHIRE	1,067	554	51.9	882	89	96	231	435	40.7
NEW.JERSEY	21,259	11,272	53.0	11,240	4,314	5,705	5,049	7,241	34.0
NEW MEXICO	3,542	2,191	61.8	2,511	0	1,031	1,512	1,325	37.4
NEW YORK	39,988	21,626	54.0	20,077	15,813	4,098	4,448	0	0.0
NORTH CAROLINA	39,002	20,917	53.6	11,733	3,112	24,157	8,002	12,927	33.1
NORTH.DAKOTA	2,308	1,093	47.3	1,185	375	748	368	437	18.9
OHIO	58,948	29,384	49.8	21,837	1,087	36,024	17,738	39,479	66.9
OKLAHOMA	7,980	4,660	58.3	3,667	496	3,817	3,511	3,188	39.9
OREGON	11,852	5,627	47.4	2,552	1,654	7,646	1,279	1,769	14.9
PENNSYLVANIA	16,394	10,000	60.9	11,372	2,892	2,130	3,073	5,354	32.6
RHODE ISLAND	1,234	741	60.0	935	196	103	20	436	35.3
SOUTH CAROLINA	8,361	4,384	52.4	5,668	2,355	338	5,668	2,254	26.9
SOUTH DAKOTA	1,395	724	51.8	1,262	0	133	1,262	1,281	91.8
TENNESSEE	16,095	8,835	54.8	10,210	736	5,149	6,392	6,482	40.2
TEXAS	69,212	34,182	49.3	24,380	22,723	22,109	24,780	20,877	30.1
UTAH	4,702	1,973	41.9	3,324	1,043	335	1,379	1,005	21.3
VERMONT	774	255	32.9	311	0	463	124	370	47.8
VIRGINIA	48,540	25,629	52.7	18,387	1,658	28,495	9,761	8,519	17.5
WASHINGTON	40,358	18,914	46.8	7,607	7,094	25,657	5,328	6,998	17.3
WEST VIRGINIA	3,361	2,020	60.1	2,447	271	643	2,403	1,221	36.3
WISCONSIN	25,954	12,994	50.0	6,407	9,094	10,453	1,693	1,702	6.5
WYOMING	2,753	939	34.1	2,753	0	0	300	0	0.0
AMERICAN SAMOA	0	0	0.0	0	0	0	0	0	0.0
N. MARIANAS IS.	21	6	28.5	21	0	0	21	19	90.4
GUAM	0	0	0.0	0	0	0	0	0	0.0
PUERTO.RICO	8,396	5,274	62.8	3,676	0	4,720	4,243	5,279	62.8
TRUST TERRITORY	10	6	60.0	0	10	0	5	7	70.0
VIRGIN ISLANDS	28	21	75.0	28	0	0	0	6	21.4

ENROLLMENT IN HEALTH OCCUPATIONS (2-DIGIT TOTAL), BY LEVEL, AND COOPERATIVE PROGRAMS, FY 1978

STATE	TOTAL	FEMALE	PCT	SECONDARY	POST-SECONDARY	ADULT	COOPERATIVE	COMPLETIONS	PCT
TOTALS	758,808	591,764	77.9	131,907	233,279	393,622	23,909	202,061	26.6
ALABAMA	6,873	5,877	85.5	2,650	0	4,223	320	1,529	22.2
ALASKA	1,021	566	55.4	132	686	203	39	721	70.6
ARIZONA	11,580	8,707	75.1	450	7,262	3,868	77	3,143	27.1
ARKANSAS	8,423	6,330	75.1	1,040	805	6,578	397	1,469	17.4
CALIFORNIA	87,279	67,891	77.7	18,611	44,705	23,963	2,440	32,641	37.3
COLORADO	8,700	6,300	72.4	802	4,450	3,448	153	2,426	27.8
CONNECTICUT	3,741	3,328	88.9	1,307	1,726	708	0	2,014	53.8
DELAWARE	2,547	2,157	84.6	1,292	1,099	156	65	819	32.1
DISTRICT OF COL.	402	376	93.5	271	131	0	272	110	27.3
FLORIDA	46,459	36,325	78.1	4,970	10,582	30,907	2,058	9,510	20.4
GEORGIA	7,614	6,274	82.4	4,504	124	2,986	301	2,837	37.2
HAWAII	842	595	70.6	0	674	168	0	304	36.1
IDAHO	1,851	1,739	93.9	223	34	1,594	6	472	25.4
ILLINOIS	34,672	28,730	82.8	8,434	22,507	3,731	1,417	9,749	28.1
INDIANA	6,765	6,052	89.4	1,875	3,311	1,579	1,011	2,644	39.0
IOWA	75,721	60,783	80.2	680	2,551	72,490	0	4,970	6.5
KANSAS	4,865	4,334	89.0	378	1,237	3,250	17	2,945	60.5
KENTUCKY	5,819	5,143	88.3	1,717	925	3,177	63	2,108	36.2
LOUISIANA	6,869	6,425	93.5	854	0	6,015	13	2,058	29.9
MAINE	5,423	3,614	66.6	703	61	4,659	122	737	13.5
MARYLAND	9,988	8,699	87.0	1,418	7,311	1,259	231	2,396	23.9
MASSACHUSETTS	8,678	7,487	86.2	2,512	3,050	3,116	129	1,281	14.7
MICHIGAN	26,048	22,712	87.1	8,164	13,793	4,091	1,656	16,606	63.7
MINNESOTA	25,712	17,522	68.1	3,570	5,447	16,695	115	5,400	21.0
MISSISSIPPI	4,674	3,556	76.0	164	2,165	2,345	130	1,518	32.4
MISSOURI	9,895	8,691	87.8	1,515	5,183	3,197	346	2,470	24.9
MONTANA	663	619	93.3	52	0	611	0	464	69.9
NEBRASKA	4,782	3,777	78.9	480	1,628	2,674	3	2,320	48.5
NEVADA	572	452	79.0	125	164	283	0	59	10.3
NEW HAMPSHIRE	1,112	924	83.0	394	538	180	58	449	40.3
NEW JERSEY	17,620	15,212	86.3	3,765	6,695	7,160	298	6,191	35.1
NEW MEXICO	2,345	2,044	87.1	1,045	466	834	72	870	37.1
NEW YORK	53,966	45,834	84.9	18,028	27,523	8,415	606	0	0.0
NORTH CAROLINA	65,127	42,190	64.7	6,070	6,212	52,845	329	15,549	23.8
NORTH DAKOTA	1,398	1,313	93.9	765	194	439	121	971	69.4
OHIO	30,374	20,084	66.1	4,301	4,512	21,561	1,260	18,736	61.6
OKLAHOMA	6,349	5,635	88.7	1,120	1,589	3,640	123	3,050	48.0
OREGON	7,668	5,598	73.0	925	2,959	3,784	593	2,482	32.3
PENNSYLVANIA	22,501	19,114	84.9	5,321	4,789	12,391	467	10,193	45.3
RHODE ISLAND	1,382	1,147	82.9	347	784	251	0	922	66.7
SOUTH CAROLINA	7,681	6,497	84.5	1,399	3,756	2,526	14	1,982	25.8
SOUTH DAKOTA	673	650	96.5	231	0	442	0	542	80.5
TENNESSEE	13,866	10,129	73.0	3,467	2,354	8,045	245	3,886	28.0
TEXAS	36,716	29,875	81.3	5,513	14,663	16,540	7,049	10,047	27.3
UTAH	5,280	4,032	76.3	4,405	830	45	107	1,281	24.2
VERMONT	627	593	94.5	373	0	254	57	345	55.0
VIRGINIA	9,220	7,109	77.1	2,454	3,029	3,737	331	3,040	32.9
WASHINGTON	21,879	15,431	70.5	675	6,223	14,981	632	3,044	13.9
WEST VIRGINIA	10,064	4,695	46.6	1,038	1,652	7,374	60	1,532	15.2
WISCONSIN	22,126	16,542	74.7	560	2,715	18,851	35	205	0.9
WYOMING	296	267	90.2	159	137	0	0	0	0.0
AMERICAN SAMOA	18	18	100.0	0	18	0	9	9	50.0
N. MARIANAS IS.	1	1	100.0	1	0	0	1	1	100.0
GUAM	0	0	0.0	0	0	0	0	0	0.0
PUERTO RICO	1,945	1,682	86.4	592	0	1,353	47	987	50.7
TRUST TERRITORY	30	22	73.3	[illegible]	30	0	14	12	40.0
VIRGIN ISLANDS	66	65	98.4	66	0	0	0	15	22.7

ENROLLMENT IN CONSUMER AND HOMEMAKING PROGRAMS (2-DIGIT TOTAL), BY LEVEL, AND COOPERATIVE PROGRAMS, FY 1978

STATE	TOTAL	FEMALE	PCT	SECONDARY	POST-SECONDARY	ADULT	COOPERATIVE	COMPLETIONS	PCT
TOTALS	3,659,441	2,946,101	80.5	2,795,949	52,340	811,152	1,687	0	0.0
ALABAMA	55,432	47,024	84.8	54,949	0	483	90	0	0.0
ALASKA	5,828	4,402	75.5	5,216	423	189	38	0	0.0
ARIZONA	63,851	47,302	74.0	49,872	132	13,847	0	0	0.0
ARKANSAS	42,232	35,578	84.2	39,482	0	2,750	0	0	0.0
CALIFORNIA	309,906	248,061	80.0	213,191	44,053	52,662	445	0	0.0
COLORADO	30,971	23,412	75.5	25,549	0	5,422	0	0	0.0
CONNECTICUT	97,400	66,700	68.4	94,918	0	2,482	0	0	0.0
DELAWARE	2,027	1,718	84.7	1,841	107	79	11	0	0.0
DISTRICT OF COL.	9,363	6,992	74.6	8,243	13	1,107	0	0	0.0
FLORIDA	136,949	109,998	80.3	70,134	457	66,358	3	0	0.0
GEORGIA	87,679	71,905	82.0	86,368	0	1,311	0	0	0.0
HAWAII	24,507	17,405	71.0	19,095	0	5,412	0	0	0.0
IDAHO	28,702	22,718	79.1	26,107	0	2,595	0	0	0.0
ILLINOIS	50,134	40,769	81.3	45,864	2,989	1,281	633	0	0.0
INDIANA	53,420	48,029	89.9	49,086	52	4,282	0	0	0.0
IOWA	107,886	83,338	77.2	51,119	0	56,767	0	0	0.0
KANSAS	46,204	37,108	80.3	44,511	0	1,693	26	0	0.0
KENTUCKY	76,531	61,786	80.7	54,003	2,118	20,410	0	0	0.0
LOUISIANA	56,488	51,214	90.6	56,117	0	371	7	0	0.0
MAINE	10,067	8,523	84.6	9,896	0	171	0	0	0.0
MARYLAND	97,952	74,494	76.0	90,657	0	7,295	0	0	0.0
MASSACHUSETTS	27,961	22,922	81.9	26,976	256	729	177	0	0.0
MICHIGAN	129,026	105,589	81.8	124,516	0	4,510	0	0	0.0
MINNESOTA	109,524	87,097	79.5	70,006	0	39,518	0	0	0.0
MISSISSIPPI	45,698	39,129	85.6	42,804	0	2,894	0	0	0.0
MISSOURI	82,076	67,543	82.2	76,511	1,115	4,450	0	0	0.0
MONTANA	7,843	6,385	81.4	7,843	0	0	0	0	0.0
NEBRASKA	41,605	33,384	80.2	32,384	0	9,221	0	0	0.0
NEVADA	3,346	2,756	82.3	3,346	0	0	0	0	0.0
NEW HAMPSHIRE	14,211	11,258	79.2	14,196	0	15	0	0	0.0
NEW.JERSEY	147,574	111,135	75.3	115,606	0	31,968	27	0	0.0
NEW MEXICO	18,790	15,320	81.5	18,438	0	352	0	0	0.0
NEW YORK	359,935	293,077	81.4	210,541	0	149,394	0	0	0.0
NORTH CAROLINA	86,666	75,606	87.2	54,448	0	32,218	0	0	0.0
NORTH.DAKOTA	15,715	11,808	75.1	13,196	0	2,519	0	0	0.0
OHIO	153,230	124,556	81.2	122,607	0	30,623	0	0	0.0
OKLAHOMA	33,242	28,548	85.8	28,734	0	4,508	0	0	0.0
OREGON	51,451	37,032	71.9	50,560	342	549	138	0	0.0
PENNSYLVANIA	74,551	60,186	80.7	69,118	0	5,433	0	0	0.0
RHODE ISLAND	10,114	7,592	75.0	10,114	0	0	0	0	0.0
SOUTH CAROLINA	40,842	34,378	84.1	36,583	0	4,259	0	0	0.0
SOUTH DAKOTA	15,420	12,951	83.9	14,620	0	800	0	0	0.0
TENNESSEE	59,783	50,828	85.0	53,090	0	6,693	0	0	0.0
TEXAS	364,155	291,901	80.1	249,470	0	114,685	0	0	0.0
UTAH	8,937	6,648	74.3	8,273	270	394	91	0	0.0
VERMONT	8,302	6,560	79.0	7,190	0	1,112	0	0	0.0
VIRGINIA	85,852	72,871	84.8	74,468	0	11,384	0	0	0.0
WASHINGTON	104,875	78,004	74.3	54,518	0	50,357	0	0	0.0
WEST VIRGINIA	30,341	24,502	80.7	17,406	10	12,925	1	0	0.0
WISCONSIN	56,408	45,691	81.0	26,624	3	29,781	0	0	0.0
WYOMING	8,813	7,046	79.9	8,813	0	0	0	0	0.0
AMERICAN SAMOA	608	608	100.0	600	0	8	0	0	0.0
N. MARIANAS IS.	353	336	95.1	353	0	0	0	0	0.0
GUAM	0	0	0.0	0	0	0	0	0	0.0
PUERTO RICO	66,469	62,255	93.6	53,583	0	12,886	0	0	0.0
TRUST TERRITORY	959	886	92.3	959	0	0	0	0	0.0
VIRGIN ISLANDS	1,237	1,237	100.0	1,237	0	0	0	0	0.0

ENROLLMENT IN HOME ECONOMICS (GAINFUL) PROGRAMS (2-DIGIT TOTAL), BY LEVEL, AND COOPERATIVE PROGRAMS, FY 1978

STATE	TOTAL	FEMALE	PCT	SECONDARY	POST-SECONDARY	ADULT	COOPERATIVE	COMPLETIONS	PCT
TOTALS	459,590	378,965	82.4	252,566	74,228	132,796	39,751	112,680	24.5
ALABAMA	4,661	4,040	86.6	4,127	0	534	176	0	0.0
ALASKA	711	480	67.5	257	257	197	22	203	28.5
ARIZONA	8,255	6,463	78.2	2,754	5,330	171	1,294	2,653	32.1
ARKANSAS	2,544	2,249	88.4	1,198	0	1,346	236	467	18.3
CALIFORNIA	59,550	50,413	84.6	19,455	34,290	5,805	1,224	15,649	26.2
COLORADO	6,629	5,188	78.2	3,065	1,509	2,055	1,612	1,824	27.5
CONNECTICUT	1,892	1,279	67.6	1,191	659	42	0	675	35.6
DELAWARE	6,037	5,870	97.2	5,835	161	41	197	1,289	21.3
DISTRICT OF COL.	446	411	92.1	279	0	167	387	197	44.1
FLORIDA	52,933	42,572	80.4	25,757	1,121	26,055	1,835	5,469	10.3
GEORGIA	4,479	3,859	86.1	3,864	0	615	1,164	1,572	35.0
HAWAII	1,312	758	57.7	1,312	0	0	51	250	19.0
IDAHO	832	460	55.2	670	55	107	6	226	27.1
ILLINOIS	62,034	52,772	85.0	52,808	6,758	2,468	4,274	10,744	17.3
INDIANA	2,632	2,166	82.2	1,609	189	834	360	593	22.5
IOWA	9,182	8,457	92.1	869	96	8,217	0	939	10.2
KANSAS	3,144	2,691	85.5	1,287	247	1,610	430	1,727	54.9
KENTUCKY	3,969	3,510	88.4	1,854	0	2,115	25	623	15.6
LOUISIANA	3,074	2,370	77.0	2,756	0	318	1,426	1,350	43.9
MAINE	749	520	69.4	578	0	171	100	318	42.4
MARYLAND	1,602	1,262	78.7	1,422	176	4	80	0	0.0
MASSACHUSETTS	5,648	4,544	80.4	3,770	659	1,219	151	523	9.2
MICHIGAN	14,331	10,277	71.7	13,523	0	808	1,304	8,375	58.4
MINNESOTA	23,585	17,451	73.9	6,107	2,247	15,231	1,057	3,555	15.0
MISSISSIPPI	3,372	3,215	95.3	1,760	326	1,286	180	1,115	33.0
MISSOURI	5,219	4,494	86.1	1,614	2,690	915	396	634	12.1
MONTANA	736	497	67.5	701	0	35	63	643	87.3
NEBRASKA	1,735	1,663	95.8	51	421	1,263	33	1,284	74.0
NEVADA	284	222	78.1	183	101	0	16	108	38.0
NEW HAMPSHIRE	862	616	71.4	730	123	9	93	338	39.2
NEW JERSEY	5,618	4,524	80.5	3,384	0	2,234	1,288	2,364	42.0
NEW MEXICO	2,259	1,783	78.9	2,183	0	76	224	763	33.7
NEW YORK	16,662	12,741	76.4	7,684	4,154	4,824	1,003	0	0.0
NORTH CAROLINA	23,115	22,186	95.9	4,524	2,457	16,134	954	8,556	37.0
NORTH DAKOTA	1,024	798	77.9	885	31	108	129	555	54.1
OHIO	15,774	13,417	85.0	8,654	808	6,312	1,871	9,010	57.1
OKLAHOMA	6,908	6,179	89.4	2,116	275	4,517	327	3,040	44.0
OREGON	3,559	2,715	76.2	2,379	413	767	898	922	25.9
PENNSYLVANIA	10,711	8,088	75.5	7,906	689	2,116	681	4,257	39.7
RHODE ISLAND	1,124	675	60.0	364	351	409	0	380	33.8
SOUTH CAROLINA	3,051	2,413	79.0	2,676	0	375	267	2,023	66.3
SOUTH DAKOTA	586	441	75.2	285	0	301	15	274	46.7
TENNESSEE	8,629	6,942	80.4	6,042	644	1,943	232	2,965	34.3
TEXAS	29,980	23,404	78.0	20,185	3,171	6,624	12,134	8,591	28.6
UTAH	2,006	1,793	89.3	1,762	126	118	270	523	26.0
VERMONT	460	449	97.6	450	0	10	91	164	35.6
VIRGINIA	7,263	6,156	84.7	6,640	49	574	374	1,553	21.3
WASHINGTON	8,734	7,420	84.9	1,602	2,520	4,612	417	1,109	12.6
WEST VIRGINIA	1,991	1,750	87.8	1,677	87	227	16	454	22.8
WISCONSIN	15,114	12,091	79.9	7,650	1,000	6,464	468	754	4.9
WYOMING	277	181	65.3	258	19	0	0	0	0.0
AMERICAN SAMOA	0	0	0.0	0	0	0	0	0	0.0
N. MARIANAS IS.	0	0	0.0	0	0	0	0	0	0.0
GUAM	0	0	0.0	0	0	0	0	0	0.0
PUERTO RICO	1,313	1,096	83.4	900	0	413	0	951	72.4
TRUST TERRITORY	116	97	83.6	97	19	0	0	47	40.5
VIRGIN ISLANDS	877	857	97.7	877	0	0	0	82	9.3

ENROLLMENT IN OFFICE OCCUPATIONS (2-DIGIT TOTAL), BY LEVEL, AND COOPERATIVE PROGRAMS, FY 1978

STATE	TOTAL	FEMALE	PCT	SECONDARY	POST-SECONDARY	ADULT	COOPERATIVE	COMPLETIONS	PCT
TOTALS	3,312,475	2,506,368	75.6	1,934,722	639,863	737,890	132,666	728,189	21.9
ALABAMA	29,157	25,501	87.4	19,553	1,716	7,888	2,040	7,428	25.4
ALASKA	14,390	10,881	75.6	8,901	4,243	1,246	347	3,975	27.6
ARIZONA	34,755	27,990	80.5	16,342	15,787	2,626	1,841	9,270	26.6
ARKANSAS	19,006	15,564	81.8	11,770	0	7,238	947	4,261	22.4
CALIFORNIA	614,708	441,134	71.7	302,931	200,021	111,756	9,965	165,424	26.9
COLORADO	41,036	32,651	79.5	20,508	10,162	10,366	2,103	9,369	22.8
CONNECTICUT	38,585	28,492	73.8	33,495	4,884	206	357	7,737	20.0
DELAWARE	12,185	10,311	84.6	6,982	3,689	1,514	605	4,071	33.4
DISTRICT OF COL.	976	731	74.8	842	134	0	630	456	46.7
FLORIDA	177,398	139,070	78.3	93,999	18,475	64,924	2,523	25,373	14.3
GEORGIA	102,867	79,875	77.6	94,315	458	8,094	6,578	37,075	36.0
HAWAII	14,142	11,506	81.3	10,638	3,375	129	380	4,572	32.3
IDAHO	7,761	6,908	89.0	5,309	432	2,020	355	2,143	27.6
ILLINOIS	238,120	164,802	69.2	179,206	45,543	13,371	11,118	50,064	21.0
INDIANA	25,986	21,967	84.5	5,526	6,595	13,865	1,526	4,694	18.0
IOWA	29,081	22,485	77.3	1,477	1,579	26,025	0	3,234	11.1
KANSAS	13,406	10,174	75.8	3,332	1,389	8,685	997	6,540	48.7
KENTUCKY	33,942	28,656	84.4	26,521	177	7,244	1,502	5,545	16.3
LOUISIANA	80,697	61,581	76.3	65,948	0	14,749	2,129	17,325	21.4
MAINE	13,622	10,396	76.3	8,532	116	4,974	251	5,842	42.8
MARYLAND	67,732	52,372	77.3	43,141	13,154	11,437	10,605	13,787	20.3
MASSACHUSETTS	88,322	64,622	73.1	73,625	8,644	6,053	458	7,991	9.0
MICHIGAN	70,267	54,077	76.9	24,335	32,538	13,394	8,575	44,914	63.9
MINNESOTA	52,685	42,996	81.6	23,323	9,569	19,793	1,905	15,322	29.0
MISSISSIPPI	13,935	12,373	88.7	2,605	3,102	8,228	638	3,482	24.9
MISSOURI	28,756	23,683	82.3	12,495	9,039	7,222	2,101	8,180	28.4
MONTANA	3,285	3,022	91.9	1,822	0	1,463	246	2,478	75.4
NEBRASKA	14,683	12,327	83.9	6,425	4,875	3,383	524	6,796	46.2
NEVADA	10,275	7,585	73.8	7,355	1,744	1,176	208	2,435	23.6
NEW HAMPSHIRE	4,415	3,794	85.9	3,197	374	844	310	2,484	56.2
NEW.JERSEY	145,807	109,877	75.3	104,296	7,971	33,540	4,450	31,548	21.6
NEW MEXICO	9,716	8,652	89.0	4,384	379	4,953	591	2,571	26.4
NEW YORK	398,656	294,117	73.7	280,923	59,918	57,815	11,530	0	0.0
NORTH CAROLINA	68,505	43,223	63.0	8,156	32,166	28,183	2,751	18,803	27.4
NORTH.DAKOTA	6,867	5,669	82.5	4,568	865	1,434	648	2,063	30.0
OHIO	58,165	52,229	89.7	29,717	4,589	23,859	5,221	33,856	58.2
OKLAHOMA	19,227	16,384	85.2	5,675	3,095	10,457	1,443	8,351	43.4
OREGON	41,104	29,281	71.2	23,656	6,931	10,517	2,841	7,765	18.8
PENNSYLVANIA	100,820	82,535	81.8	65,552	12,162	23,106	2,084	37,764	37.4
RHODE ISLAND	18,392	10,243	55.6	13,885	1,592	2,915	106	7,179	39.0
SOUTH CAROLINA	49,106	35,098	71.4	30,743	14,844	3,519	382	6,894	14.0
SOUTH DAKOTA	1,699	1,554	91.4	797	0	902	199	1,477	86.9
TENNESSEE	46,835	36,966	78.9	13,352	10,381	23,102	481	16,723	35.7
TEXAS	93,616	73,271	78.2	22,143	35,534	35,939	18,128	20,619	22.0
UTAH	14,878	11,522	77.4	12,044	2,152	682	318	3,484	23.4
VERMONT	4,451	3,509	78.8	2,881	0	1,570	213	2,470	55.4
VIRGINIA	95,763	73,338	76.5	55,351	15,872	24,540	3,269	13,031	13.6
WASHINGTON	88,276	65,385	74.0	39,769	13,784	34,723	1,163	15,339	17.3
WEST VIRGINIA	33,010	25,192	76.3	27,057	1,944	4,009	310	4,807	14.5
WISCONSIN	89,919	75,812	84.3	45,685	13,581	30,653	1,865	5,756	6.4
WYOMING	13,142	9,089	69.1	13,067	75	0	154	0	0.0
AMERICAN SAMOA	406	289	71.1	229	177	0	54	146	35.9
N. MARIANAS IS.	426	340	79.8	426	0	0	20	74	17.3
GUAM	0	0	0.0	0	0	0	0	0	0.0
PUERTO.RICO	15,805	13,995	88.5	14,276	0	1,529	2,891	4,705	29.7
TRUST TERRITORY	1,178	764	64.8	1,141	37	0	90	330	28.0
VIRGIN ISLANDS	529	508	96.0	499	0	30	0	167	31.5

ENROLLMENT IN TECHNICAL EDUCATION PROGRAMS (2-DIGIT TOTAL), BY LEVEL, AND COOPERATIVE PROGRAMS, FY 1978

STATE	TOTAL	FEMALE	PCT	SECONDARY	POST-SECONDARY	ADULT	COOPERATIVE	COMPLETIONS	PCT
TOTALS	527,681	93,001	17.6	39,273	330,441	157,967	7,794	94,305	17.8
ALABAMA	2,739	71	2.5	0	46	2,693	0	10	0.3
ALASKA	1,839	286	15.5	0	1,570	269	0	1,220	66.3
ARIZONA	7,068	835	11.8	5	6,870	193	125	1,922	27.1
ARKANSAS	677	54	7.9	0	0	677	0	87	12.8
CALIFORNIA	91,420	18,922	20.6	410	82,973	8,037	2,033	19,048	20.8
COLORADO	13,100	1,951	14.8	1,720	6,492	4,888	140	1,834	14.0
CONNECTICUT	1,017	310	30.4	0	1,017	0	0	175	17.2
DELAWARE	2,084	201	9.6	308	1,776	0	24	889	42.6
DISTRICT OF COL.	0	0	0.0	0	0	0	0	0	0.0
FLORIDA	41,945	7,989	19.0	1,237	9,381	31,327	134	2,657	6.3
GEORGIA	2,580	246	9.5	0	30	2,550	0	798	30.9
HAWAII	1,239	38	3.0	678	521	40	31	317	25.5
IDAHO	466	30	6.4	0	286	180	0	104	22.3
ILLINOIS	20,507	1,958	9.5	0	17,891	2,616	154	2,449	11.9
INDIANA	6,312	327	5.1	0	4,857	1,455	10	1,028	16.2
IOWA	2,580	306	11.8	0	1,687	893	0	560	21.7
KANSAS	720	50	6.9	26	208	486	0	233	32.3
KENTUCKY	892	81	9.0	233	0	659	72	160	17.9
LOUISIANA	1,728	138	7.9	50	0	1,678	11	114	6.5
MAINE	1,862	113	6.0	0	311	1,551	0	291	15.6
MARYLAND	10,946	3,482	31.8	293	10,103	550	495	2,097	19.1
MASSACHUSETTS	7,196	983	13.6	1,177	3,593	2,426	108	488	6.7
MICHIGAN	25,811	7,976	30.9	0	25,694	117	543	13,984	54.1
MINNESOTA	12,783	1,325	10.3	0	6,028	6,755	[illegible]	2,155	16.8
MISSISSIPPI	3,260	308	9.4	0	1,646	1,614	0	615	18.8
MISSOURI	7,973	1,453	18.2	552	6,850	571	31	848	10.6
MONTANA	165	6	3.6	0	0	165	0	144	87.2
NEBRASKA	1,001	12	1.1	3	954	44	0	167	16.6
NEVADA	1,369	149	10.8	179	772	418	2	443	32.3
NEW HAMPSHIRE	584	41	7.0	0	346	238	0	122	20.8
NEW JERSEY	20,969	6,072	29.0	3,529	13,393	3,947	4	6,891	33.0
NEW MEXICO	1,931	602	31.1	0	286	1,645	0	361	18.6
NEW YORK	43,505	5,931	13.6	12,981	23,613	6,911	271	0	0.0
NORTH CAROLINA	21,453	2,984	13.9	0	16,464	4,989	298	4,172	19.4
NORTH DAKOTA	1,086	81	7.4	0	1,020	66	90	356	32.7
OHIO	5,435	626	11.5	0	4,934	501	1,265	1,493	27.4
OKLAHOMA	2,705	286	10.5	0	2,705	0	0	792	29.2
OREGON	6,508	549	8.4	16	4,285	2,207	250	885	13.5
PENNSYLVANIA	28,750	7,289	25.3	10,746	9,409	8,595	800	9,203	32.0
RHODE ISLAND	1,127	95	8.4	282	511	334	0	567	50.3
SOUTH CAROLINA	9,319	1,127	12.0	0	9,262	57	0	900	9.6
SOUTH DAKOTA	0	0	0.0	0	0	0	0	0	0.0
TENNESSEE	13,275	2,325	17.5	812	9,428	3,035	59	1,870	14.0
TEXAS	48,966	8,934	18.2	1,429	16,187	31,350	572	7,445	15.2
UTAH	2,390	245	10.2	1,758	501	131	4	468	19.5
VERMONT	147	44	29.9	0	0	147	0	136	92.5
VIRGINIA	9,776	1,186	12.1	0	7,271	2,505	0	1,191	12.[illegible]
WASHINGTON	21,886	2,697	12.3	0	5,089	16,797	196	1,156	5.2
WEST VIRGINIA	3,370	495	14.6	693	2,089	588	18	650	19.2
WISCONSIN	10,993	1,624	14.7	0	10,322	671	0	0	0.0
WYOMING	81	6	7.4	0	81	0	0	0	0.0
AMERICAN SAMOA	24	3	12.5	0	24	0	9	6	25.0
N. MARIANAS IS.	5	2	40.0	5	0	0	5	4	80.0
GUAM	0	0	0.0	0	0	0	0	0	0.0
PUERTO RICO	2,066	150	7.2	0	1,665	401	0	765	37.0
TRUST TERRITORY	0	0	0.0	0	0	0	0	0	0.0
VIRGIN ISLANDS	151	7	4.6	151	0	0	0	35	23.1

ENROLLMENT IN TRADE AND INDUSTRIAL EDUCATION PROGMS (2-DIGIT TOTAL), BY LEVEL, AND COOPERATIVE PROGRAMS, FY 1978

STATE	TOTAL	FEMALE	PCT	SECONDARY	POST-SECONDARY	ADULT	COOPERATIVE	COMPLETIONS	PCT
TOTALS	3,402,722	527,142	15.4	1,469,828	423,506	1,509,388	136,930	856,388	25.[illegible]
ALABAMA	73,501	9,238	12.5	27,860	3,693	41,948	3,446	13,783	18.7
ALASKA	13,176	1,875	14.2	9,324	1,719	2,133	103	3,248	24.6
ARIZONA	39,682	7,243	18.2	9,756	23,567	6,359	1,880	10,770	27.1
ARKANSAS	32,979	3,768	11.4	10,845	0	22,134	1,616	5,176	15.6
CALIFORNIA	430,920	86,204	20.0	153,762	151,961	125,197	4,997	127,908	29.6
COLORADO	28,405	5,289	18.6	10,856	11,030	6,519	1,681	6,125	21.5
CONNECTICUT	35,038	6,061	17.2	22,337	493	12,208	2,890	7,608	21.7
DELAWARE	19,341	925	4.7	4,336	1,225	13,780	526	2,607	13.4
DISTRICT OF COL.	5,576	432	7.7	5,241	160	175	563	2,035	36.4
FLORIDA	160,783	27,409	17.0	57,621	12,389	90,773	7,358	20,377	12.6
GEORGIA	53,669	8,393	15.6	41,175	416	12,078	4,538	13,780	25.6
HAWAII	15,082	1,663	11.0	5,752	5,537	3,793	465	2,293	15.2
IDAHO	10,547	652	6.1	2,973	877	6,697	0	1,574	14.9
ILLINOIS	224,563	24,592	10.9	176,638	33,873	14,052	8,598	41,992	18.6
INDIANA	60,520	8,531	14.0	21,263	6,058	33,199	3,370	9,600	15.8
IOWA	39,696	4,820	12.1	7,027	542	32,127	0	10,745	27.0
KANSAS	22,779	3,018	13.2	4,720	1,515	16,544	814	13,740	60.3
KENTUCKY	49,370	4,940	10.0	16,585	133	32,652	1,031	5,777	11.7
LOUISIANA	37,788	3,374	8.9	10,084	0	27,704	130	5,130	13.5
MAINE	16,628	1,605	9.6	5,238	327	11,063	962	2,903	17.4
MARYLAND	34,634	6,459	18.6	21,362	3,522	9,750	1,342	6,257	18.0
MASSACHUSETTS	55,747	7,068	12.6	42,234	1,014	12,499	1,670	5,576	10.0
MICHIGAN	101,260	22,620	22.3	48,471	14,617	38,172	4,829	71,238	70.3
MINNESOTA	94,711	8,778	9.2	33,990	16,473	44,248	3,831	20,818	21.9
MISSISSIPPI	44,715	5,700	12.7	12,580	5,670	26,465	766	9,782	21.8
MISSOURI	39,630	3,109	7.8	19,489	2,568	17,573	2,623	8,365	21.1
MONTANA	5,995	458	7.6	4,718	0	1,277	16	4,798	80.0
NEBRASKA	16,027	1,022	6.3	3,681	6,097	6,249	227	2,591	16.1
NEVADA	11,325	882	7.7	8,074	268	2,983	167	1,342	11.8
NEW HAMPSHIRE	9,238	572	6.1	3,296	1,042	4,900	249	1,690	18.2
NEW JERSEY	116,350	20,180	17.3	50,563	759	65,028	5,802	23,184	19.9
NEW MEXICO	11,736	1,030	8.7	4,769	0	6,967	851	2,656	22.6
NEW YORK	203,636	40,131	19.7	96,796	23,606	83,234	2,126	0	0.0
NORTH CAROLINA	149,605	26,718	17.8	51,431	2,540	95,634	7,473	32,618	21.8
NORTH DAKOTA	8,451	602	7.1	3,526	392	4,533	185	2,209	26.1
OHIO	148,495	17,446	11.7	65,272	46	83,177	19,716	94,710	63.7
OKLAHOMA	63,764	8,[illegible]	13.5	16,444	1,309	46,011	1,547	39,064	61.2
OREGON	40,011	6,354	15.8	11,710	13,498	14,803	2,455	6,322	15.8
PENNSYLVANIA	160,212	26,711	16.6	73,522	3,712	82,978	12,009	85,333	53.2
RHODE ISLAND	7,251	671	9.2	4,008	0	3,243	330	2,765	38.1
SOUTH CAROLINA	46,987	7,399	15.7	28,956	2,318	15,713	438	11,000	23.4
SOUTH DAKOTA	4,497	234	5.2	2,259	0	2,238	0	2,719	60.4
TENNESSEE	83,923	15,045	17.9	44,232	130	39,561	2,329	29,390	35.0
TEXAS	161,745	19,416	12.0	61,491	39,711	60,543	11,585	33,064	20.4
UTAH	22,721	4,532	19.9	18,250	3,530	941	1,301	5,281	23.2
VERMONT	8,655	1,137	13.1	3,827	0	4,828	431	5,770	66.6
VIRGINIA	66,257	12,493	18.8	35,251	7,803	23,203	5,118	12,353	18.6
WASHINGTON	141,451	33,911	23.9	8,843	14,278	118,330	490	8,726	6.1
WEST VIRGINIA	35,175	2,923	8.3	13,960	780	20,435	319	4,011	11.4
WISCONSIN	104,135	9,163	8.7	47,380	2,008	54,747	1,098	7,202	6.9
WYOMING	11,225	1,325	11.8	11,207	18	0	0	0	0.0
AMERICAN SAMOA	254	0	0.0	159	57	38	3	33	12.9
N. MARIANAS IS.	580	50	8.6	580	0	0	3	29	5.0
GUAM	0	0	0.0	0	0	0	0	0	0.0
PUERTO RICO	20,223	4,[illegible]37	20.9	12,289	0	7,934	715	7,523	37.2
TRUST TERRITORY	1,688	34	2.0	1,463	225	0	16	685	40.5
VIRGIN ISLANDS	370	68	18.3	352	0	18	0	113	30.5

TABLE 001-TOTAL EXPENDITURES FOR VOCATIONAL EDUCATION, FROM FEDERAL AND MATCHING FUNDS, FOR FY 1978

STATE	TOTALS	FEDERAL		STATE/LOCAL	
TOTALS	4,989,706,482	375,977,376	7.5	4,613,729,086	92.5
ALABAMA	60,367,621	8,527,134	14.1	51,840,487	85.9
ALASKA	4,672,131	338,608	7.2	4,333,523	92.8
ARIZONA	38,808,259	5,344,956	13.8	33,463,303	86.2
ARKANSAS	28,970,207	5,182,271	17.9	23,787,936	82.1
CALIFORNIA	491,250,718	27,577,519	5.6	463,673,199	94.4
COLORADO	75,502,797	5,992,819	7.9	69,509,978	92.1
CONNECTICUT	47,113,522	4,384,841	9.3	42,728,681	90.7
DELAWARE	12,682,819	1,389,612	11.0	11,293,207	89.0
DISTRICT OF COL.	6,172,208	1,651,979	26.8	4,520,229	73.2
FLORIDA	164,235,044	7,533,427	4.6	156,701,617	95.4
GEORGIA	93,537,003	9,428,877	10.1	84,108,126	89.9
HAWAII	13,169,535	1,694,413	12.9	11,475,122	87.1
IDAHO	16,073,001	2,162,464	13.5	13,910,537	86.5
ILLINOIS	374,794,497	22,736,909	6.1	352,057,588	93.9
INDIANA	30,924,831	7,326,209	23.7	23,598,322	76.3
IOWA	52,645,075	6,478,531	12.3	46,166,544	87.7
KANSAS	36,741,223	3,701,120	10.1	33,040,103	89.9
KENTUCKY	60,617,352	7,795,060	12.9	52,822,292	87.1
LOUISIANA	62,924,805	11,294,043	17.9	51,630,762	82.1
MAINE	22,399,872	2,897,607	12.9	19,502,265	87.1
MARYLAND	104,734,603	5,304,250	5.1	99,430,353	94.9
MASSACHUSETTS	209,108,791	3,536,321	1.7	205,572,470	98.3
MICHIGAN	154,137,458	12,495,786	8.1	141,641,672	91.9
MINNESOTA	112,135,313	9,696,809	8.6	102,438,504	91.4
MISSISSIPPI	35,810,489	6,496,346	18.1	29,314,143	81.9
MISSOURI	82,652,833	10,908,502	13.2	71,744,331	86.8
MONTANA	11,775,001	1,721,873	14.6	10,053,128	85.4
NEBRASKA	22,264,207	3,228,760	14.5	19,035,447	85.5
NEVADA	11,854,142	652,751	5.5	11,201,391	94.5
NEW HAMPSHIRE	12,094,437	1,094,042	9.0	11,000,395	91.0
NEW JERSEY	168,632,124	13,950,526	8.3	154,681,598	91.7
NEW MEXICO	22,095,241	1,564,401	7.1	20,530,810	92.9
NEW YORK	546,409,390	32,431,722	5.9	513,977,668	94.1
NORTH CAROLINA	174,084,756	15,702,314	9.0	158,382,442	91.0
NORTH DAKOTA	15,189,676	1,720,414	11.3	13,469,262	88.7
OHIO	314,187,352	22,803,827	7.3	291,383,525	92.7
OKLAHOMA	75,813,479	6,069,888	8.0	69,743,591	92.0
OREGON	11,400,154	3,265,543	28.6	8,134,611	71.4
PENNSYLVANIA	262,585,398	16,850,792	6.4	245,734,606	93.6
RHODE ISLAND	22,664,794	1,582,233	7.0	21,082,561	93.0
SOUTH CAROLINA	86,925,911	8,202,821	9.4	78,723,090	90.6
SOUTH DAKOTA	9,616,695	2,045,303	21.3	7,571,392	78.7
TENNESSEE	90,027,922	9,483,288	10.5	80,544,634	89.5
TEXAS	247,751,331	8,956,922	3.6	238,794,409	96.4
UTAH	28,911,245	3,516,880	12.2	25,394,365	87.8
VERMONT	7,770,970	629,594	8.1	7,141,376	91.9
VIRGINIA	121,130,309	10,778,000	8.9	110,352,309	91.1
WASHINGTON	137,852,767	2,942,227	2.1	134,910,540	97.9
WEST VIRGINIA	44,923,627	3,925,217	8.7	40,998,410	91.3
WISCONSIN	115,471,168	3,655,784	3.2	111,815,384	96.8
WYOMING	5,488,413	859,205	15.7	4,629,208	84.3
AMERICAN SAMOA	826,439	71,694	8.7	754,745	91.3
N. MARIANAS IS.	9,360	9,360	100.0	0	0.0
GUAM	0	0	0.0	0	0.0
PUERTO RICO	29,765,751	6,383,186	21.4	23,382,565	78.6
TRUST TERRITORY	2,396	2,396	100.0	0	0.0
VIRGIN ISLANDS	0	0	0.0	0	0.0

TABLE 003-VOCATIONAL EDUCATION EXPENDITURES FOR THE HANDICAPPED, UNDER SECTION 102A, VOCATIONAL EDUCATION AMENDMENTS OF 1968 FY 1978

STATE	TOTALS	FEDERAL		STATE/LOCAL	
TOTALS	168,845,590	33,219,098	19.7	135,426,492	80.3
ALABAMA	1,951,833	914,100	46.8	1,037,733	53.2
ALASKA	63,278	28,278	44.7	35,000	55.3
ARIZONA	1,507,095	487,896	32.4	1,019,199	67.6
ARKANSAS	1,665,157	544,399	32.7	1,120,758	67.3
CALIFORNIA	51,110,905	2,752,555	5.4	48,358,350	94.6
COLORADO	2,371,156	310,191	13.1	2,060,965	8[illegible].9
CONNECTICUT	2,986,721	652,497	21.8	2,334,224	78.2
DELAWARE	290,319	129,847	44.7	160,472	55.3
DISTRICT OF COL.	354,974	153,394	43.2	201,580	56.8
FLORIDA	4,445,041	970,182	21.8	3,474,859	78.2
GEORGIA	1,302,177	248,466	19.1	1,053,711	80.9
HAWAII	457,540	191,406	41.8	266,134	58.2
IDAHO	363,449	142,452	39.2	220,997	60.8
ILLINOIS	13,528,323	2,038,500	15.1	11,489,823	84.9
INDIANA	1,609,189	757,179	47.1	852,010	52.9
IOWA	1,353,463	561,548	41.5	791,915	58.5
KANSAS	241,548	119,335	49.4	122,213	50.6
KENTUCKY	1,195,868	594,853	49.7	601,015	50.3
LOUISIANA	3,382,738	999,996	29.6	2,382,742	70.4
MAINE	1,304,434	290,969	22.3	1,013,465	77.7
MARYLAND	3,361,728	401,197	11.9	2,960,531	88.1
MASSACHUSETTS	17,505,125	426,30[illegible]	2.4	17,078,820	97.6
MICHIGAN	3,147,189	1,607,648	51.1	1,539,541	48.9
MINNESOTA	2,817,920	767,920	27.3	2,050,000	72.7
MISSISSIPPI	1,476,466	644,791	43.7	831,675	56.3
MISSOURI	794,888	316,37[illegible]	39.8	478,51[illegible]	60.2
MONTANA	162,396	91,765	56.5	70,631	43.5
NEBRASKA	468,910	224,518	47.9	244,392	52.1
NEVADA	504,298	52,907	10.5	451,391	89.5
NEW HAMPSHIRE	256,471	80,746	31.5	175,725	68.5
NEW JERSEY	3,613,163	1,547,281	42.8	2,065,882	57.2
NEW MEXICO	1,215,536	304,101	25.0	911,435	75.0
NEW YORK	11,360,316	2,865,553	25.2	8,494,763	74.8
NORTH CAROLINA	2,212,284	1,098,169	49.6	1,114,115	50.4
NORTH DAKOTA	435,140	192,791	44.3	242,349	55.7
OHIO	4,854,66[illegible]	2,194,542	45.2	2,660,122	54.8
OKLAHOMA	1,449,1[illegible]3	606,319	41.8	842,804	58.2
OREGON	61[illegible],[illegible]11	212,340	34.5	403,671	65.5
PENNSYLVANIA	3,40[illegible],681	1,594,786	46.8	1,811,895	53.2
RHODE ISLAND	940,234	126,542	13.5	813,692	86.5
SOUTH CAROLINA	1,421,186	665,630	46.8	755,556	53.2
SOUTH DAKOTA	278,746	139,126	[illegible]9.9	139,620	50.1
TENNESSEE	2,804,380	1,286,745	[illegible].9	1,517,635	54.1
TEXAS	3,483,072	260,190	7.5	3,222,882	92.5
UTAH	793,050	344,493	43.4	448,557	56.6
VERMONT	40,750	40,750	100.0	0	0.0
VIRGINIA	2,197,803	736,230	33.5	1,461,573	66.5
WASHINGTON	688,295	147,322	21.4	540,973	78.6
WEST VIRGINIA	1,283,894	4[illegible]6,917	33.3	856,977	66.7
WISCONSIN	2,600,216	4[illegible]2,887	16.6	2,167,329	83.4
WYOMING	117,136	58,568	50.0	58,568	50.0
AMERICAN SAMOA	17,891	17,891	100.0	0	0.0
N. MARIANAS IS.	0	0	0.0	0	0.0
GUAM	0	0	0.0	0	0.0
PUERTO RICO	835,420	417,710	50.0	417,710	50.0
TRUST TERRITORY	0	0	0.0	0	0.0
VIRGIN ISLANDS	0	0	0.0	0	0.0

TABLE 004-VOCATIONAL EDUCATION EXPENDITURES FOR THE DISADVANTAGED, UNDER SECTION 102A, VOCATIONAL EDUCATION AMENDMENTS OF 1968 FY 1978

STATE	TOTALS	FEDERAL		STATE/LOCAL	
TOTALS	400,510,519	63,147,062	15.8	337,363,457	84.2
ALABAMA	5,852,776	1,897,625	32.4	3,955,151	67.6
ALASKA	241,158	91,083	37.8	150,075	62.2
ARIZONA	1,705,344	851,172	49.9	854,172	50.1
ARKANSAS	8,449,165	1,818,211	21.5	6,630,954	78.5
CALIFORNIA	97,743,606	5,238,808	5.4	92,504,798	94.6
COLORADO	1,290,138	934,471	72.4	355,667	27.6
CONNECTICUT	2,248,572	717,989	31.9	1,530,583	68.1
DELAWARE	1,893,126	263,975	13.9	1,629,151	86.1
DISTRICT OF COL.	628,275	289,076	46.0	339,199	54.0
FLORIDA	16,155,036	1,183,010	7.3	14,972,026	92.7
GEORGIA	4,101,716	1,696,525	41.4	2,405,191	58.6
HAWAII	1,328,569	345,550	26.0	983,019	74.0
IDAHO	616,153	255,276	41.4	360,877	58.6
ILLINOIS	31,786,126	4,077,000	12.8	27,709,126	87.2
INDIANA	3,234,333	1,235,112	38.2	1,999,221	61.8
IOWA	2,612,224	1,025,444	39.3	1,586,780	60.7
KANSAS	515,450	256,826	49.8	258,624	50.2
KENTUCKY	2,453,017	1,196,793	48.8	1,256,224	51.2
LOUISIANA	4,409,000	2,043,393	46.3	2,365,607	53.7
MAINE	1,382,955	581,937	42.1	801,018	57.9
MARYLAND	7,465,367	553,157	7.4	6,912,210	92.6
MASSACHUSETTS	10,968,256	372,015	3.4	10,596,241	96.6
MICHIGAN	7,115,493	2,747,531	38.6	4,367,962	61.4
MINNESOTA	3,860,156	1,360,156	35.2	2,500,000	64.8
MISSISSIPPI	2,030,643	959,991	47.3	1,070,652	52.7
MISSOURI	2,637,936	1,291,880	49.0	1,346,056	51.0
MONTANA	223,384	96,551	43.2	126,833	56.8
NEBRASKA	1,055,500	511,542	48.5	543,958	51.5
NEVADA	849,275	105,815	12.5	743,460	87.5
NEW HAMPSHIRE	323,212	126,266	39.1	196,946	60.9
NEW JERSEY	6,836,667	2,765,771	40.5	4,070,896	59.5
NEW MEXICO	5,226,623	330,391	6.3	4,896,232	93.7
NEW YORK	56,359,304	4,989,107	8.9	51,370,197	91.1
NORTH CAROLINA	5,508,350	2,753,402	50.0	2,754,948	50.0
NORTH DAKOTA	381,913	181,417	47.5	200,496	52.5
OHIO	40,685,820	3,914,617	9.6	36,771,203	90.4
OKLAHOMA	3,106,022	1,332,155	42.9	1,773,867	57.1
OREGON	665,591	476,176	71.5	189,415	28.5
PENNSYLVANIA	5,4[illegible],664	2,114,587	39.0	3,309,077	61.0
RHODE ISLAND	2,518,602	295,008	11.7	2,223,594	88.3
SOUTH CAROLINA	2,700,368	1,250,585	46.3	1,449,783	53.7
SOUTH DAKOTA	691,166	344,383	49.8	346,783	50.2
TENNESSEE	5,367,818	1,897,519	35.3	3,470,299	64.7
TEXAS	15,781,597	459,889	2.9	15,321,708	97.1
UTAH	1,305,385	559,693	42.9	745,692	57.1
VERMONT	0	0	0.0	0	0.0
VIRGINIA	5,053,786	2,138,976	42.3	2,914,810	57.7
WASHINGTON	1,287,044	318,208	24.7	968,836	75.3
WEST VIRGINIA	1,520,688	745,144	49.0	775,544	51.0
WISCONSIN	8,478,412	688,412	8.1	7,790,000	91.9
WYOMING	302,019	151,007	50.0	151,012	50.0
AMERICAN SAMOA	26,265	26,265	100.0	0	0.0
N. MARIANAS IS.	390	390	100.0	0	0.0
GUAM	0	0	0.0	0	0.0
PUERTO RICO	6,107,064	1,289,780	21.1	4,817,284	78.9
TRUST TERRITORY	0	0	0.0	0	0.0
VIRGIN ISLANDS	0	0	0.0	0	0.0

TABLE 005-VOCATIONAL EDUCATION EXPENDITURES FOR THE LIMITED ENGLISH-SPEAKING ABILITY, UNDER SECTION 102A, VOCATIONAL EDUCATION AMENDMENTS OF 1968 FY 1978

STATE	TOTALS	FEDERAL		STATE/LOCAL	
TOTALS	19,009,579	2,450,172	12.9	16,559,407	87.1
ALABAMA	2,151	2,151	100.0	0	0.0
ALASKA	0	0	0.0	0	0.0
ARIZONA	471,310	235,155	49.9	236,155	50.1
ARKANSAS	13,132	5,294	40.3	7,838	59.7
CALIFORNIA	4,463,075	255,529	5.7	4,207,546	94.3
COLORADO	20,623	20,623	100.0	0	0.0
CONNECTICUT	0	0	0.0	0	0.0
DELAWARE	0	0	0.0	0	0.0
DISTRICT OF COL.	25,000	25,000	100.0	0	0.0
FLORIDA	170,243	0	0.0	170,243	100.0
GEORGIA	0	0	0.0	0	0.0
HAWAII	0	0	0.0	0	0.0
IDAHO	617	0	0.0	617	100.0
ILLINOIS	512,770	57,847	11.3	454,923	88.7
INDIANA	0	0	0.0	0	0.0
IOWA	69,326	27,854	40.2	41,472	59.8
KANSAS	48,758	35,615	73.0	13,143	27.0
KENTUCKY	0	0	0.0	0	0.0
LOUISIANA	0	0	0.0	0	0.0
MAINE	0	0	0.0	0	0.0
MARYLAND	0	0	0.0	0	0.0
MASSACHUSETTS	1,668,522	181,234	10.9	1,487,288	89.1
MICHIGAN	0	0	0.0	0	0.0
MINNESOTA	351,368	175,684	50.0	175,684	50.0
MISSISSIPPI	0	0	0.0	0	0.0
MISSOURI	0	0	0.0	0	0.0
MONTANA	0	0	0.0	0	0.0
NEBRASKA	10,477	5,078	48.5	5,399	51.5
NEVADA	3,012	1,720	57.1	1,292	42.9
NEW HAMPSHIRE	0	0	0.0	0	0.0
NEW JERSEY	92,711	72,670	78.4	20,041	21.6
NEW MEXICO	1,332,911	294,121	22.1	1,038,790	77.9
NEW YORK	7,735,342	730,315	9.4	7,005,027	90.6
NORTH CAROLINA	10,779	5,389	50.0	5,390	50.0
NORTH DAKOTA	8,162	8,162	100.0	0	0.0
OHIO	53,300	43,537	81.7	9,763	18.3
OKLAHOMA	0	0	0.0	0	0.0
OREGON	0	0	0.0	0	0.0
PENNSYLVANIA	19,970	16,237	81.3	3,733	18.7
RHODE ISLAND	318,302	0	0.0	618,302	100.0
SOUTH CAROLINA	0	0	0.0	0	0.0
SOUTH DAKOTA	0	0	0.0	0	0.0
TENNESSEE	0	0	0.0	0	0.0
TEXAS	0	0	0.0	0	0.0
UTAH	415,981	55,417	13.3	360,564	86.7
VERMONT	0	0	0.0	0	0.0
VIRGINIA	0	0	0.0	0	0.0
WASHINGTON	383,455	4,229	1.1	379,226	98.9
WEST VIRGINIA	518	259	50.0	259	50.0
WISCONSIN	263,057	63,940	24.3	199,117	75.7
WYOMING	35,190	17,595	50.0	17,595	50.0
AMERICAN SAMOA	9,517	9,517	100.0	0	0.0
N. MARIANAS IS.	0	0	0.0	0	0.0
GUAM	0	0	0.0	0	0.0
PUERTO RICO	200,000	100,000	50.0	100,000	50.0
TRUST TERRITORY	0	0	0.0	0	0.0
VIRGIN ISLANDS	0	0	0.0	0	0.0

TABLE 006-VOCATIONAL EDUCATION EXPENDITURES FOR ADULT AND POSTSECONDARY EDUCATION, UNDER SECTION 102
VOCATIONAL EDUCATION AMENDMENTS OF 1968 FY 1978

STATE	TOTALS	FEDERAL		STATE/LOCAL	
TOTALS	1,329,366,661	81,888,995	6.2	1,247,477,666	93.8
ALABAMA	23,384,979	1,535,858	6.6	21,849,121	93.4
ALASKA	161,422	7,602	4.7	153,820	95.3
ARIZONA	14,368,896	605,589	4.2	13,763,307	95.8
ARKANSAS	11,210,760	2,118,764	18.9	9,091,996	81.1
CALIFORNIA	6,151,637	273,983	4.5	5,877,654	95.5
COLORADO	26,190,580	2,678,250	10.2	23,512,330	89.8
CONNECTICUT	13,516,299	508,560	3.8	13,007,739	96.2
DELAWARE	4,547,214	199,822	4.4	4,347,392	95.6
DISTRICT OF COL.	841,630	231,448	27.5	610,182	72.5
FLORIDA	54,632,643	853,956	1.6	53,778,687	98.4
GEORGIA	32,895,996	3,915,901	11.9	28,980,095	88.1
HAWAII	353,661	25,218	7.1	328,443	92.9
IDAHO	7,244,256	922,037	12.7	6,322,219	87.3
ILLINOIS	109,107,625	5,294,466	4.9	103,813,159	95.1
INDIANA	282,311	178,084	63.1	104,227	36.9
IOWA	33,785,321	3,573,829	10.6	30,211,492	89.4
KANSAS	16,087,887	1,357,138	8.4	14,730,749	91.6
KENTUCKY	10,234,655	1,841,321	18.0	8,393,334	82.0
LOUISIANA	21,442,857	4,023,943	18.8	17,418,914	81.2
MAINE	8,275,467	852,402	10.3	7,423,065	89.7
MARYLAND	1,754,074	93,431	5.3	1,660,643	94.7
MASSACHUSETTS	40,956,735	101,184	0.2	40,855,551	99.8
MICHIGAN	56,124,266	2,434,037	4.3	53,690,229	95.7
MINNESOTA	63,021,506	3,921,506	6.2	59,100,000	93.8
MISSISSIPPI	12,608,076	1,060,980	8.4	11,547,096	91.6
MISSOURI	17,893,789	2,786,863	15.6	15,106,926	84.4
MONTANA	5,105,543	892,921	17.5	4,212,622	82.5
NEBRASKA	12,568,777	809,826	6.4	11,758,951	93.6
NEVADA	3,033,176	79,361	2.6	2,953,815	97.4
NEW HAMPSHIRE	3,540,444	222,291	6.3	3,318,153	93.7
NEW JERSEY	66,600,553	2,199,056	3.3	64,401,497	96.7
NEW MEXICO	6,377,888	1,015,555	15.9	5,362,333	84.1
NEW YORK	82,715,445	4,385,246	5.3	78,330,197	94.7
NORTH CAROLINA	108,812,348	2,291,083	2.1	106,521,265	97.9
NORTH DAKOTA	5,421,209	633,608	11.7	4,787,601	88.3
OHIO	34,475,931	4,840,862	14.0	29,635,069	86.0
OKLAHOMA	33,731,316	1,083,613	3.2	32,647,703	96.8
OREGON	2,516,552	1,085,702	43.1	1,430,850	56.9
PENNSYLVANIA	13,021,033	2,799,885	21.5	10,221,148	78.5
RHODE ISLAND	2,166,854	208,216	9.6	1,958,638	90.4
SOUTH CAROLINA	52,288,382	1,277,770	2.4	51,010,612	97.6
SOUTH DAKOTA	2,876,640	685,050	23.8	2,191,590	76.2
TENNESSEE	24,474,148	3,086,017	12.6	21,388,131	87.4
TEXAS	90,503,490	5,656,716	6.3	84,846,774	93.7
UTAH	9,891,868	1,372,434	13.9	8,519,434	86.1
VERMONT	368,819	52,717	14.3	316,102	85.7
VIRGINIA	19,836,752	1,931,903	9.7	17,904,849	90.3
WASHINGTON	49,982,838	682,063	1.4	49,300,775	98.6
WEST VIRGINIA	8,364,957	851,137	10.2	7,513,820	89.8
WISCONSIN	97,374,149	1,248,976	1.3	96,125,173	98.7
WYOMING	1,471,594	148,206	10.1	1,323,388	89.9
AMERICAN SAMOA	51,046	51,046	100.0	0	0.0
N. MARIANAS IS.	0	0	0.0	0	0.0
GUAM	0	0	0.0	0	0.0
PUERTO RICO	4,720,367	901,561	19.1	3,818,806	80.9
TRUST TERRITORY	0	0	0.0	0	0.0
VIRGIN ISLANDS	0	0	0.0	0	0.0

TABLE 007-TOTAL VOCATIONAL EDUCATION EXPENDITURES UNDER SECTION 120, VOCATIONAL EDUCATION AMENDMENTS OF 1968 FY 1978

STATE	TOTALS	FEDERAL		STATE/LOCAL	
TOTALS	4,345,154,820	278,185,406	6.4	4,066,969,414	93.6
ALABAMA	50,526,263	6,112,546	12.1	44,413,717	87.9
ALASKA	4,478,783	223,660	5.0	4,255,123	95.0
ARIZONA	32,860,265	4,047,982	12.3	28,812,283	87.7
ARKANSAS	21,576,026	3,797,338	17.6	17,778,688	82.4
CALIFORNIA	442,646,399	22,176,336	5.0	420,470,063	95.0
COLORADO	66,693,855	4,305,299	6.5	62,388,556	93.5
CONNECTICUT	39,844,078	3,233,887	8.1	36,610,191	91.9
DELAWARE	10,720,408	989,287	9.2	9,731,121	90.8
DISTRICT OF COL.	5,415,697	1,196,652	22.1	4,219,045	77.9
FLORIDA	145,233,325	4,901,549	3.4	140,331,776	96.6
GEORGIA	80,733,269	6,936,510	8.6	73,796,759	91.4
HAWAII	10,973,271	1,264,172	11.5	9,709,099	88.5
IDAHO	12,814,734	1,508,764	11.8	11,305,970	88.2
ILLINOIS	365,609,315	17,802,241	4.9	347,807,074	95.1
INDIANA	23,315,937	5,053,052	21.7	18,262,885	78.3
IOWA	46,388,444	4,919,413	10.6	41,469,031	89.4
KANSAS	30,384,374	2,939,041	9.7	27,445,333	90.3
KENTUCKY	50,614,991	5,795,079	11.4	44,819,912	88.6
LOUISIANA	47,155,835	8,268,890	17.5	38,686,945	82.5
MAINE	20,179,314	2,223,599	11.0	17,955,715	89.0
MARYLAND	87,736,736	3,943,774	4.5	83,792,962	95.5
MASSACHUSETTS	192,906,292	2,791,409	1.4	190,114,883	98.6
MICHIGAN	127,159,706	8,489,896	6.7	118,669,810	93.3
MINNESOTA	97,401,052	7,290,594	7.5	90,110,458	92.5
MISSISSIPPI	26,665,162	4,626,953	17.4	22,038,209	82.6
MISSOURI	58,730,902	8,415,502	14.3	50,315,400	85.7
MONTANA	10,035,896	1,299,614	12.9	8,736,282	87.1
NEBRASKA	18,951,182	2,403,927	12.7	16,547,255	87.3
NEVADA	10,639,850	529,079	5.0	10,110,771	95.0
NEW HAMPSHIRE	9,682,934	862,484	8.9	8,820,450	91.1
NEW JERSEY	157,622,341	10,232,085	6.5	147,390,256	93.5
NEW MEXICO	18,597,628	1,210,151	6.5	17,387,477	93.5
NEW YORK	491,876,226	23,020,428	4.7	468,855,798	95.3
NORTH CAROLINA	150,981,147	11,171,390	7.4	139,809,757	92.6
NORTH DAKOTA	12,493,476	1,207,892	9.7	11,285,584	90.3
OHIO	248,839,033	16,094,520	6.5	232,744,513	93.5
OKLAHOMA	65,519,989	4,235,384	6.5	61,284,605	93.5
OREGON	10,256,995	2,312,122	22.5	7,944,873	77.5
PENNSYLVANIA	244,057,237	12,247,283	5.0	231,809,954	95.0
RHODE ISLAND	19,920,300	1,096,203	5.5	18,824,097	94.5
SOUTH CAROLINA	80,587,460	5,631,431	7.0	74,956,029	93.0
SOUTH DAKOTA	7,054,610	1,500,458	21.3	5,554,152	78.7
TENNESSEE	77,445,189	7,830,188	10.1	69,615,001	89.9
TEXAS	198,865,427	6,820,504	3.4	192,044,923	96.6
UTAH	25,267,213	2,621,273	10.4	22,645,940	89.6
VERMONT	6,332,792	498,032	7.9	5,834,760	92.1
VIRGINIA	104,472,788	8,352,916	8.0	96,119,872	92.0
WASHINGTON	115,842,190	2,407,291	2.1	113,434,899	97.9
WEST VIRGINIA	39,741,003	3,094,114	7.8	36,646,889	92.2
WISCONSIN	98,611,146	2,480,056	2.5	96,131,090	97.5
WYOMING	3,967,904	647,107	16.3	3,320,797	83.7
AMERICAN SAMOA	777,394	59,149	7.6	718,245	92.4
N. MARIANAS IS.	2,754	2,754	100.0	0	0.0
GUAM	0	0	0.0	0	0.0
PUERTO RICO	17,945,887	5,061,750	28.2	12,884,137	71.8
TRUST TERRITORY	2,396	2,396	100.0	0	0.0
VIRGIN ISLANDS	0	0	0.0	0	0.0

TABLE 024-TOTAL VOCATIONAL EDUCATION EXPENDITURES UNDER SECTION 130, VOCATIONAL EDUCATION AMENDMENTS OF 1968 FY 1978

STATE	TOTALS	FEDERAL		STATE/LOCAL	
TOTALS	231,233,575	57,901,532	25.0	173,332,043	75.0
ALABAMA	3,162,905	1,273,343	40.3	1,889,562	59.7
ALASKA	113,039	76,781	67.9	36,258	32.1
ARIZONA	1,053,793	706,852	67.1	346,941	32.9
ARKANSAS	3,238,314	707,948	21.9	2,530,366	78.1
CALIFORNIA	2,583,200	2,327,025	90.1	256,175	9.9
COLORADO	3,515,324	1,098,652	31.3	2,416,672	68.7
CONNECTICUT	841,637	673,566	80.0	168,071	20.0
DELAWARE	1,488,277	260,284	17.5	1,227,993	82.5
DISTRICT OF COL.	327,676	308,840	94.3	18,836	5.7
FLORIDA	12,042,667	2,117,162	17.6	9,925,505	82.4
GEORGIA	3,172,368	2,020,570	63.7	1,151,798	36.3
HAWAII	1,023,326	289,026	28.2	734,300	71.8
IDAHO	1,251,071	456,553	36.5	794,518	63.5
ILLINOIS	3,513,300	2,424,943	69.0	1,088,357	31.0
INDIANA	1,870,494	1,337,840	71.5	532,654	28.5
IOWA	940,323	782,442	83.2	157,881	16.8
KANSAS	1,098,507	341,693	31.1	756,814	68.9
KENTUCKY	1,545,302	968,470	62.7	576,832	37.3
LOUISIANA	6,767,667	1,887,394	27.9	4,880,273	72.1
MAINE	839,865	413,704	49.3	426,161	50.7
MARYLAND	1,261,977	831,397	65.9	430,580	34.1
MASSACHUSETTS	7,462,791	569,500	7.6	6,893,291	92.4
MICHIGAN	15,768,755	1,861,825	11.8	13,906,930	88.2
MINNESOTA	8,142,302	1,468,913	18.0	6,673,389	82.0
MISSISSIPPI	6,242,506	1,274,026	20.4	4,968,480	79.6
MISSOURI	15,527,425	1,468,193	9.5	14,059,232	90.5
MONTANA	267,421	238,278	89.1	29,143	10.9
NEBRASKA	1,076,826	462,085	42.9	614,741	57.1
NEVADA	134,758	51,108	37.9	83,650	62.1
NEW HAMPSHIRE	497,308	117,363	23.6	379,945	76.4
NEW JERSEY	5,597,944	2,366,055	42.3	3,231,889	57.7
NEW MEXICO	402,530	311,838	77.5	90,692	22.5
NEW YORK	30,129,101	5,566,338	18.5	24,562,763	81.5
NORTH CAROLINA	9,520,854	2,813,737	29.6	6,707,117	70.4
NORTH DAKOTA	726,251	314,383	43.3	411,868	56.7
OHIO	14,291,052	4,430,147	31.0	9,860,905	69.0
OKLAHOMA	4,529,072	1,061,625	23.4	3,467,447	76.6
OREGON	561,982	560,529	99.7	1,453	0.3
PENNSYLVANIA	13,730,222	2,643,331	19.3	11,086,891	80.7
RHODE ISLAND	672,950	331,390	49.2	341,560	50.8
SOUTH CAROLINA	2,685,918	1,661,395	61.9	1,024,523	38.1
SOUTH DAKOTA	527,228	298,173	56.6	229,055	43.4
TENNESSEE	3,347,601	626,282	18.7	2,721,319	81.3
TEXAS	8,399,157	1,527,225	18.2	6,871,932	81.8
UTAH	2,110,152	547,338	25.9	1,562,814	74.1
VERMONT	314,784	67,199	21.3	247,585	78.7
VIRGINIA	2,764,499	1,284,791	46.5	1,479,708	53.5
WASHINGTON	5,150,493	440,649	8.6	4,709,844	91.4
WEST VIRGINIA	1,501,493	469,168	31.2	1,032,325	68.8
WISCONSIN	12,989,121	846,813	6.5	12,142,308	93.5
WYOMING	232,240	116,120	50.0	116,120	50.0
AMERICAN SAMOA	25,586	9,086	35.5	16,500	64.5
N. MARIANAS IS.	6,606	6,606	100.0	0	0.0
GUAM	0	0	0.0	0	0.0
PUERTO RICO	4,245,615	785,538	18.5	3,460,077	81.5
TRUST TERRITORY	0	0	0.0	0	0.0
VIRGIN ISLANDS	0	0	0.0	0	0.0

TABLE 002-TOTAL VOCATIONAL EDUCATION EXPENDITURES UNDER SECTION 140, VOCATIONAL EDUCATION AMENDMENTS OF 1968 FY 1978

STATE	TOTALS	FEDERAL		STATE/LOCAL	
	20,011,177	11,583,176	57.9	8,428,001	42.1
ALABAMA	365,756	365,756	100.0	0	0.0
ALASKA	13,984	7,942	56.8	6,042	43.2
ARIZONA	329,310	218,534	66.4	110,776	33.6
ARKANSAS	267,181	221,984	83.1	45,197	16.9
CALIFORNIA	1,191,242	872,867	73.3	318,375	26.7
COLORADO	347,928	135,176	38.9	212,752	61.1
CONNECTICUT	193,096	193,096	100.0	0	0.0
DELAWARE	146,829	52,328	35.6	94,501	64.4
DISTRICT OF COL.	50,362	50,362	100.0	0	0.0
FLORIDA	944,520	131,134	13.9	813,386	86.1
GEORGIA	0	0	0.0	0	0.0
HAWAII	66,399	66,399	100.0	0	0.0
IDAHO	17,487	16,308	93.3	1,179	6.7
ILLINOIS	2,189,316	769,159	35.1	1,420,157	64.9
INDIANA	0	0	0.0	0	0.0
IOWA	451,380	247,265	54.8	204,115	45.2
KANSAS	127,194	82,332	64.7	44,862	35.3
KENTUCKY	367,391	367,391	100.0	0	0.0
LOUISIANA	1,809,773	377,201	20.8	1,432,572	79.2
MAINE	32,578	32,578	100.0	0	0.0
MARYLAND	243,424	203,829	83.7	39,595	16.3
MASSACHUSETTS	54,329	54,329	100.0	0	0.0
MICHIGAN	1,000,839	792,203	79.2	208,636	20.8
MINNESOTA	370,993	370,993	100.0	0	0.0
MISSISSIPPI	474,582	265,024	55.8	209,558	44.2
MISSOURI	238,168	99,137	41.6	139,031	58.4
MONTANA	21,732	21,732	100.0	0	0.0
NEBRASKA	99,086	97,228	98.1	1,858	1.9
NEVADA	54,288	5,240	9.7	49,048	90.3
NEW HAMPSHIRE	45,700	45,700	100.0	0	0.0
NEW JERSEY	1,120,909	550,091	49.1	570,818	50.9
NEW MEXICO	330	330	100.0	0	0.0
NEW YORK	1,112,568	1,112,568	100.0	0	0.0
NORTH CAROLINA	507,202	507,202	100.0	0	0.0
NORTH DAKOTA	84,262	64,319	76.3	19,943	23.7
OHIO	553,076	522,401	94.5	30,675	5.5
OKLAHOMA	601,518	273,151	45.4	328,367	54.6
OREGON	84,6[illegible]	55,150	65.2	29,499	34.8
PENNSYLVANIA	1,585 [illegible]3	67[illegible],038	42 [illegible]	906,645	57.2
RHODE ISLAND	0	0	0.[illegible]	0	0.0
SOUTH CAROLINA	239,138	237,667	99.4	1,471	0.6
SOUTH DAKOTA	79,733	79,733	100.0	0	0.0
TENNESSEE	537,010	432,750	80.6	104,260	19.4
TEXAS	239,699	239,699	100.0	0	0.0
UTAH	652,249	103,798	15.9	548,451	84.1
VERMONT	0	0	0.0	0	0.0
VIRGINIA	482,802	249,133	51.6	233,669	48.4
WASHINGTON	65,565	13,716	20.9	51,849	79.1
WEST VIRGINIA	381,627	143,798	37.7	237,829	62.3
WISCONSIN	113,413	100,528	88.6	12,885	11.4
WYOMING	13,380	13,380	100.0	0	0.0
AMERICAN SAMOA	3,459	3,459	100.0	0	0.0
N. MARIANAS IS.	0	0	0.0	0	0.0
GUAM	0	0	0.0	0	0.0
PUERTO RICO	38,038	38,038	100.0	0	0.0
TRUST TERRITORY	0	0	0.0	0	0.0
VIRGIN ISLANDS	0	0	0.0	0	0.0

TABLE O31-TOTAL VOCATIONAL EDUCATION EXPENDITURES UNDER SECTION 150, VOCATIONAL EDUCATION AMENDMENTS OF 1968 FY 1978

STATE	TOTALS	FEDERAL		STATE/LOCAL	
TOTALS	393,306,890	28,307,262	7.2	364,999,628	92.8
ALABAMA	6,312,697	775,489	12.3	5,537,208	87.7
ALASKA	66,325	30,225	45.6	36,100	54.4
ARIZONA	4,564,891	371,588	8.1	4,193,303	91.9
ARKANSAS	3,888,686	455,001	11.7	3,433,685	88.3
CALIFORNIA	44,829,877	2,201,291	4.9	42,628,586	95.1
COLORADO	4,945,690	453,692	9.2	4,491,998	90.8
CONNECTICUT	6,234,711	284,292	4.6	5,950,419	95.4
DELAWARE	327,305	87,713	26.8	239,592	73.2
DISTRICT OF. COL.	378,473	96,125	25.4	282,348	74.6
FLORIDA	6,014,532	383,582	6.4	5,630,950	93.6
GEORGIA	9,631,366	471,797	4.9	9,159,569	95.1
HAWAII	1,106,539	74,816	6.8	1,031,723	93.2
IDAHO	1,989,709	180,839	9.1	1,808,870	90.9
ILLINOIS	3,482,566	1,740,566	50.0	1,742,000	50.0
INDIANA	5,738,400	935,317	16.3	4,803,083	83.7
IOWA	4,864,928	529,411	10.9	4,335,517	89.1
KANSAS	5,131,148	338,054	6.6	4,793,094	93.4
KENTUCKY	8,089,668	664,120	8.2	7,425,548	91.8
LOUISIANA	7,191,530	760,558	10.6	6,430,972	89.4
MAINE	1,348,115	227,726	16.9	1,120,389	83.1
MARYLAND	15,492,466	325,250	2.1	15,167,216	97.9
MASSACHUSETTS	8,685,379	121,083	1.4	8,564,296	98.6
MICHIGAN	10,208,158	1,351,862	13.2	8,856,296	86.8
MINNESOTA	6,220,966	566,309	9.1	5,654,657	90.9
MISSISSIPPI	2,428,239	330,343	13.6	2,097,896	86.4
MISSOURI	8,156,338	925,670	11.3	7,230,668	88.7
MONTANA	1,449,952	162,249	11.2	1,287,703	88.8
NEBRASKA	2,137,113	265,520	12.4	1,871,593	87.6
NEVADA	1,025,246	67,324	6.6	957,922	93.4
NEW HAMPSHIRE	1,868,495	68,495	3.7	1,800,000	96.3
NEW JERSEY	4,290,930	802,295	18.7	3,488,635	81.3
NEW MEXICO	3,094,753	42,082	1.4	3,052,671	98.6
NEW YORK	23,291,495	2,732,388	11.7	20,559,107	88.3
NORTH CAROLINA	13,075,553	1,209,985	9.3	11,865,568	90.7
NORTH DAKOTA	1,885,687	133,820	7.1	1,751,867	92.9
OHIO	50,504,191	1,756,759	3.5	48,747,432	96.5
OKLAHOMA	5,162,900	499,728	9.7	4,663,172	90.3
OREGON	496,528	337,742	68.0	158,786	32.0
PENNSYLVANIA	3,212,256	1,281,140	39.9	1,931,116	60.1
RHODE ISLAND	2,071,544	154,640	7.5	1,916,904	92.5
SOUTH CAROLINA	3,413,395	672,328	19.7	2,741,067	80.3
SOUTH DAKOTA	1,955,124	166,939	8.5	1,788,185	91.5
TENNESSEE	8,698,122	594,068	6.8	8,104,054	93.2
TEXAS	40,247,048	369,494	0.9	39,877,554	99.1
UTAH	881,631	244,471	27.7	637,160	72.3
VERMONT	1,123,394	64,363	5.7	1,059,031	94.3
VIRGINIA	13,410,220	891,160	6.6	12,519,060	93.4
WASHINGTON	16,794,519	80,571	0.5	16,713,948	99.5
WEST VIRGINIA	3,299,504	218,137	6.6	3,081,367	93.4
WISCONSIN	3,757,488	228,387	6.1	3,529,101	93.9
WYOMING	1,274,889	82,598	6.5	1,192,291	93.5
AMERICAN SAMOA	20,000	0	0.0	20,000	100.0
N. MARIANAS IS.	0	0	0.0	0	0.0
GUAM	0	0	0.0	0	0.0
PUERTO RICO	7,536,211	497,860	6.6	7,038,351	93.4
TRUST TERRITORY	0	0	0.0	0	0.0
VIRGIN ISLANDS	0	0	0.0	0	0.0

SUMMARY OF PLACEMENTS OF VOCATIONAL EDUCATION PROGRAM COMPLETIONS, ALL LEVELS, FY 1977

TABLE 060

STATE	TOTAL COMPLETIONS	STATUS UNKNOWN	CONTINUING STUDY	OTHER REASONS	PLACED FULL-TIME	NUMBER UNEMPLOYED	OTHER EMPLOYMENT
TOTALS	2,224,190	491,816	381,919	145,805	778,427	114,275	311,883
ALABAMA	27,543	1,492	5,454	2,709	12,359	1,334	4,195
ALASKA	12,345	7,824	735	41	3,109	330	306
ARIZONA	30,115	22,019	1,306	1,218	2,949	850	1,773
ARKANSAS	16,565	951	3,642	1,474	8,154	766	1,556
CALIFORNIA	295,399	93,134	31,760	22,359	90,350	13,785	44,010
COLORADO	30,835	4,015	5,774	882	16,146	820	3,198
CONNECTICUT	22,493	2,088	7,410	1,248	7,705	1,113	2,929
DELAWARE	10,303	935	753	526	5,309	1,316	1,464
DISTRICT OF COL.	3,210	62	216	35	2,591	57	249
FLORIDA	79,514	4,783	16,364	7,246	30,727	5,619	14,775
GEORGIA	63,875	25,504	10,148	3,054	16,125	3,066	5,978
HAWAII	10,181	1,732	5,230	554	1,105	601	959
IDAHO	6,523	435	1,721	486	3,057	166	658
ILLINOIS	134,053	35,058	28,902	6,944	41,725	4,338	17,086
INDIANA	25,044	2,619	4,061	1,384	12,902	955	3,123
IOWA	15,728	1,874	2,045	597	9,177	335	1,700
KANSAS	14,848	3,863	2,234	501	6,840	322	1,088
KENTUCKY	19,955	1,560	3,422	996	11,091	556	2,330
LOUISIANA	37,359	4,252	10,827	2,661	14,675	1,407	3,537
MAINE	9,641	1,659	1,638	645	3,550	505	1,644
MARYLAND	24,966	1,753	3,207	6,271	6,693	4,614	2,428
MASSACHUSETTS	43,572	3,573	10,078	2,155	18,608	4,333	4,757
MICHIGAN	112,557	47,551	13,645	2,638	23,502	6,196	19,025
MINNESOTA	63,207	7,617	10,068	4,468	31,172	1,969	7,913
MISSISSIPPI	20,355	1,206	4,697	1,493	8,357	823	3,279
MISSOURI	27,705	3,316	5,617	4,071	8,198	541	4,652
MONTANA	13,789	1,422	3,353	575	6,179	823	1,427
NEBRASKA	12,231	904	3,633	726	5,206	294	1,468
NEVADA	14,139	3,658	3,188	753	2,746	1,409	2,385
NEW HAMPSHIRE	7,005	1,956	1,344	269	2,229	186	1,021
NEW JERSEY	76,077	12,604	13,182	4,303	34,941	5,223	5,824
NEW MEXICO	8,195	1,292	1,736	401	3,167	320	1,279
NEW YORK	194,395	50,395	35,355	16,830	48,981	12,926	29,908
NORTH CAROLINA	94,134	18,803	16,311	7,875	39,453	2,698	8,994
NORTH DAKOTA	8,143	398	2,825	650	2,959	341	970
OHIO	62,016	4,227	6,429	4,930	33,451	3,360	9,619
OKLAHOMA	37,797	2,200	5,710	888	23,952	908	4,139
OREGON	20,921	1,046	8,874	574	5,228	514	4,685
PENNSYLVANIA	82,226	5,020	15,232	6,138	21,250	7,866	26,720
RHODE ISLAND	0	0	0	0	0	0	0
SOUTH CAROLINA	27,613	2,651	6,295	2,831	9,728	1,556	4,552
SOUTH DAKOTA	6,978	387	2,187	874	2,502	137	891
TENNESSEE	63,924	9,393	9,254	5,863	22,047	4,783	12,584
TEXAS	130,231	54,231	15,323	3,174	41,009	2,629	13,865
UTAH	27,021	1,700	8,270	1,276	12,531	672	2,572
VERMONT	2,897	180	656	312	949	152	648
VIRGINIA	49,709	4,423	8,435	3,346	22,010	5,006	6,489
WASHINGTON	42,882	8,222	9,972	1,947	15,594	1,714	5,433
WEST VIRGINIA	18,958	1,849	4,085	1,629	6,856	1,304	3,235
WISCONSIN	35,3[illegible]1	3,731	7,171	502	15,762	1,2[illegible]	7,842
WYOMING	4,929	448	1,301	220	2,369	128	463
AMERICAN SAMOA	0	0	0	0	0	0	0
GUAM	145	68	4	2	26	14	31
PUERTO RICO	23,550	19,730	839	1,508	43	1,228	202
TRUST TERRITORY	0	0	0	0	0	0	0
VIRGIN ISLANDS	0	0	0	0	0	0	0